Panasonic

Digital Video Camera
數位攝錄影機
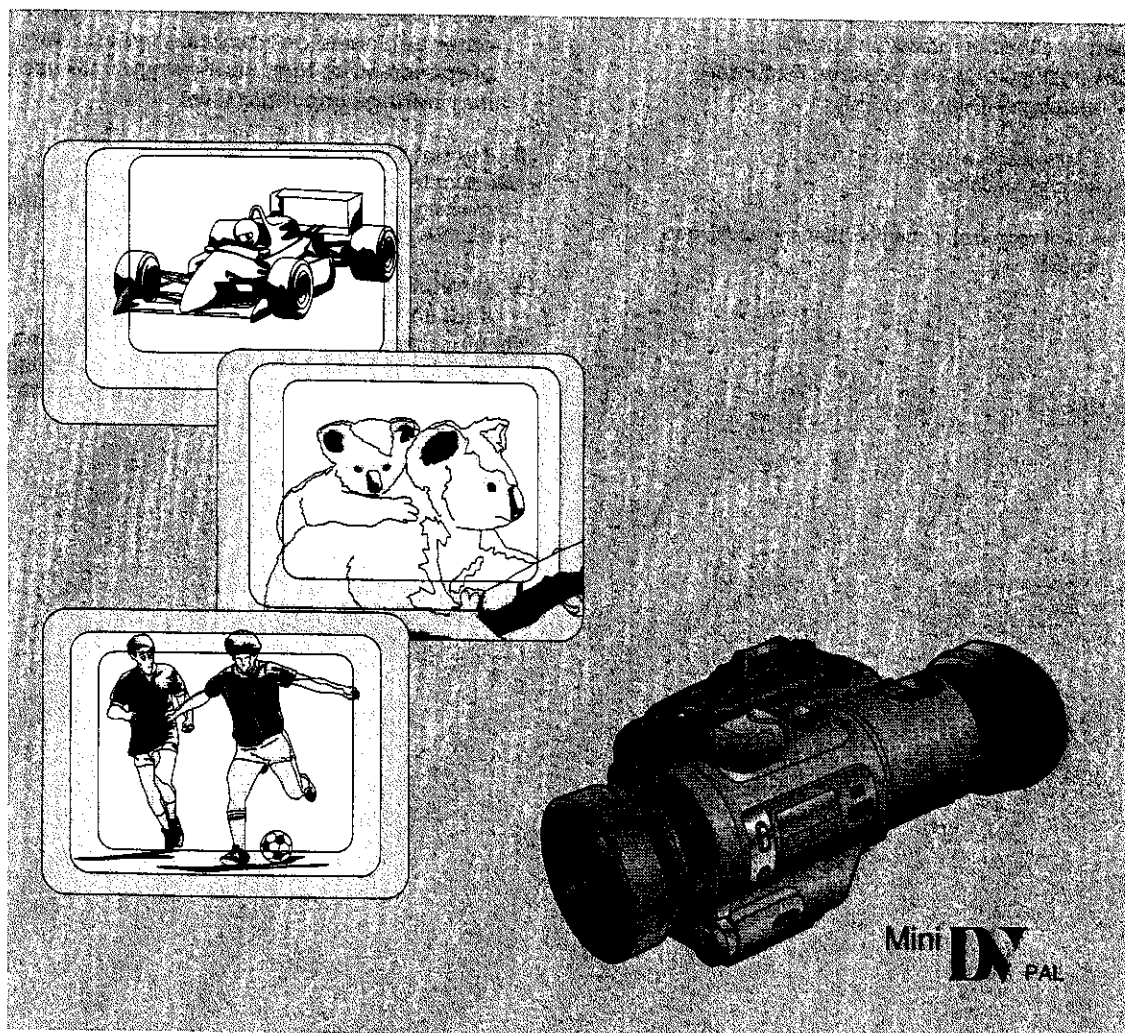
NV-DX1EN

Operating Instructions

使用說明書
Инструкция по эксплуатации
إرشادات التشغيل

Mini **DV** PAL

Before use, please read these instructions completely.
使用之前，請仔細閱讀本說明書。

Dear Customer,

With this Movie Camera, you can capture life's precious moments with superior picture and sound quality. It is equipped with many advanced features, but at the same time it is easy to use.

We recommend that you spend a few hours getting well acquainted with your Movie Camera before you go out to record your first important event. Please read these Operating Instructions carefully and try out all the available functions one after another so that you can make optimum use of all the versatile features this Movie Camera offers.

Be sure to also read the Precautions (→ 134) and to keep these instructions handy for future reference.

■ About these Instructions

1. Pages for reference are indicated with an arrow, for example: (→ 20).

2. To keep the explanations simple and concise, the abbreviated forms of the following terms are used:
- **Recording** (instead of Filming or Shooting)
- **Cassette** (instead of Video Cassette)
- **Battery** (instead of Battery Pack)
- **Finder** (instead of Viewfinder)
- **Lamp** (instead of Indication Lamp)
- **VCR** (instead of Video Cassette Recorder)
- **TV** (instead of Television Set)

3. Special symbols in the text
☞ Notes and cautions
♥ Hints
● Result of preceding operation step and additional comments

Information for Your Safety

> **WARNING**
> To reduce the risk of fire or shock hazard and annoying interference, use only the recommended accessories and do not expose this equipment to rain or moisture. Do not remove the cover (or back); there are no user serviceable parts inside. Refer servicing to qualified service personnel.

Movie Camera
- The rating plate is on the bottom side of the Movie Camera.

AC Adaptor
- The rating plate is on the bottom side of the AC Adaptor.

IMPORTANT

■ Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws.

■ Try out the Movie Camera.
- Be sure to try out the Movie Camera before recording your first important event and check that it records properly and functions correctly.

■ Carefully read the Operating Instructions and use the Movie Camera correctly.
- Injury or material damage resulting from any kind of use that is not in accordance with the operating procedures explained in these instructions are the sole responsibility of the user.

Contents

If you want to immediately use the Movie Camera:
Read the pages marked with ♠.

1.	2. (A) (B) (C)	3.
4.	5.	6.
7.	8.	9. CR 2032	10.

Getting Ready to Try out the Movie Camera at Home

This chapter explains the necessary steps before you can start using the Movie Camera.

Checking the Standard Accessories

1. **AC Adaptor (→ 18)**
   For supplying power to the Movie Camera and for charging the Battery
   DC Input Cable (→ 18)
   For connecting the AC Adaptor to the Movie Camera
2. **AC Mains Cables (3) (→ 18)**
   For connecting the AC Adaptor to an AC mains socket
   (A) Hong Kong only
   (B) Australia and New Zealand only
   (C) Area other than Hong Kong, Australia and New Zealand.
   Check the power plug since its shape may differ from country to country.
3. **Battery (→ 64)**
   For supplying power to the Movie Camera
4. **Shoulder Strap (→ 70)**
5. **Remote Controller, Remote Controller Holder and Button-Type Battery (CR2025) (→ 70, 108)**
6. **Multi AV Cable (→ 36)**
   For connecting the Movie Camera to a TV or VCR
7. **Cassette (→ 20)**
8. **Head Cleaning Cassette (→ 138)**
   For cleaning the video heads
9. **Button-type Battery (CR2032) for the Movie Camera (→ 56)**
   For the operation of the Movie Camera's internal clock
10. **Lens Cleaning Tissue (→ 44)**
    For cleaning the lens

中 文

作好在家中試拍攝錄影機的準備

本章解釋了開始使用攝錄影機之前，必須完成的步驟。

檢查標準附件時

1. 交流轉接器(→18)
   給攝錄影機供電和對電池充電。
   直流輸入纜線(→18)
   用於將交流轉接器連接至攝錄影機。
2. 交流主電源纜線(3)(→18)
   用於將交流轉接器連接至交流主電源插座。
   (A) 僅限於香港
   (B) 僅限於澳大利亞和新西蘭
   (C) 對於香港、澳大利亞和新西蘭以外的地區，請檢查電源插頭，因其形狀可能會因國家而不同。
3. 電池(→64)
   給攝錄影機供電。
4. 肩用背帶 (→70)
5. 遙控器、遙控器支座和鈕扣式電池(CR2025)(→70,108)
6. 多用AV (音頻/影像) 纜線 (→36)
   用於將攝錄影機連接至TV或VCR。
7. 磁帶 (→20)
8. 磁頭清洗磁帶 (→138)
   用於清洗影像磁頭。
9. 攝錄影機用鈕扣式電池(CR2032)(→56)
   用於攝錄影機的內部時鐘運行。
10. 鏡頭紙 (→44)
    用於清潔鏡頭。
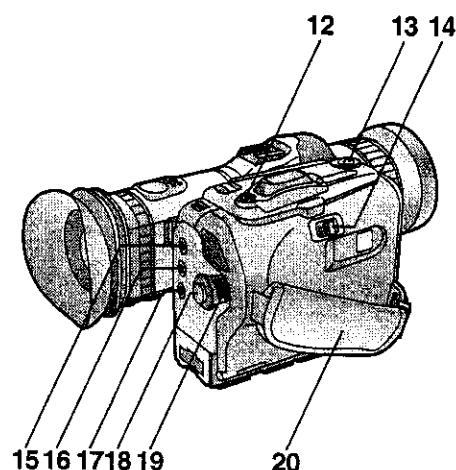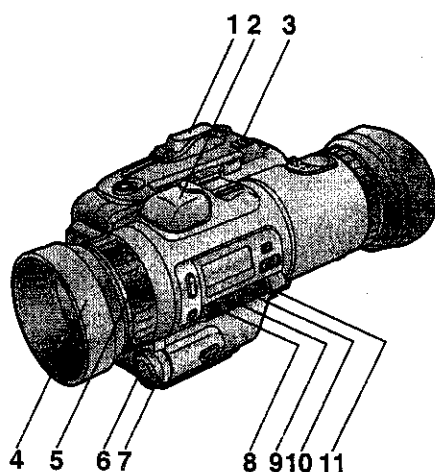
Controls and Components

1 [W·T] Zoom Buttons (→ 30)

2 Microphone

3 [CAMERA SEARCH +/–] Buttons (→ 26)

4 Lens Hood

5 Manual Focus Ring (→ 98)

6 [SHUTTER/IRIS] Button (→ 100, 104, 106)

7 [SHUTTER/IRIS] Control (→ 100, 104, 106)

8 [FOCUS] Button (→ 98)

9 [W.B] White Balance Button (→ 88, 92)

10 [GAIN] Button (→ 102)

11 [AE LOCK] Button (→ 104)

12 [PHOTO SHOT] Button (→ 80)

13 Auxiliary Start/Stop Button (→ 24)

14 [RELEASE] Lever (→ 20, 28, 34, 56, 68)

15 [RESET] Button (→ 118)

16 [COUNTER/DISPLAY] Button (→ 118)

17 [DATE/TIME] Button (→ 72)

18 Start/Stop Button (→ 24)

19 [POWER] Switch (→ 22, 24, 34)

20 Grip Belt (→ 22)

控制和組件

1 [W·T]變焦鈕(→30)

2 麥克風

3 [CAMERA SEARCH +/–]鈕(→26)

4 鏡頭遮光罩

5 手動聚焦環(→98)

6 [SHUTTER/IRIS]鈕(→100,104,106)

7 [SHUTTER/IRIS]控制(→100,104,106)

8 [FOCUS]鈕(→98)

9 [W.B]白色平衡鈕(→88,92)

10 [GAIN]鈕(→102)

11 [AE LOCK]鈕(→104)

12 [PHOTO SHOT]鈕(→80)

13 輔助Start/Stop鈕(→24)

14 [RELEASE]柄(→20, 28, 34, 56, 68)

15 [RESET]鈕(→118)

16 [COUNTER/DISPLAY]鈕(→118)

17 [DATE/TIME]鈕(→72)

18 Start/Stop鈕(→24)

19 [POWER]開關(→22, 24, 34)

20 扣抓皮帶(→22)
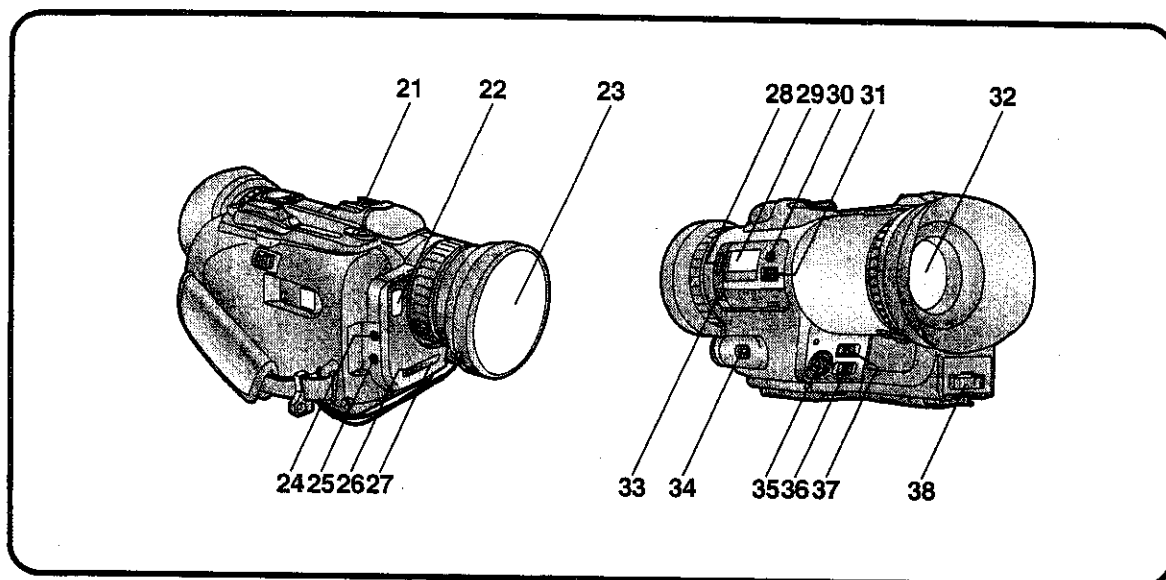
ENGLISH	中 文
21 Accessory Shoe	21 輔助座
22 White Balance Sensor (→ 148)	22 白色平衡感應器(→148)
23 Lens Cap (→ 22)	23 鏡頭蓋(→22)
24 [PHONES] Socket (→ 34, 126)	24 [PHONES]插孔(→34, 126)
25 [MIC] Socket	25 [MIC]插孔
26 Tally Lamp (→ 24)	26 識別燈(→24)
27 Remote Controller Sensor (→ 108)	27 紅外線遙控感應器(→108)
28 [FADE] Button (→ 78)	28 [FADE]鈕(→78)
29 LCD Screen (→ 164, 166)	29 液晶顯示屏(→164, 166)
30 [COUNTER SELECT] Button (→ 166)	30 [COUNTER SELECT]鈕(→166)
31 [MANUAL/AUTO] Switch (→ 24, 84, 88, 90, 92, 94, 98, 100, 102, 104, 106)	31 [MANUAL/AUTO]開關(→24, 84, 88, 90, 92, 94, 98, 100, 102, 104, 106)
32 Finder (→ 22)	32 尋像器(→22)
33 [IMAGE STABILIZER] Button (→ 76)	33 [IMAGE STABILIZER]鈕(→76)
34 [TURBO ZOOM] Button(→ 32)	34 [TURBO ZOOM]鈕(→32)
35 [EDIT] Socket (→ 132)	35 [EDIT]插孔(→132)
36 [POWER SAVE] Switch (→ 74)	36 [POWER SAVE]開關(→74)
37 [NORMAL/CINEMA] Switch (→ 82)	37 [NORMAL/CINEMA]開關(→82)
38 [OUTPUT] Socket (→ 36)	38 [OUTPUT]插孔(→36)
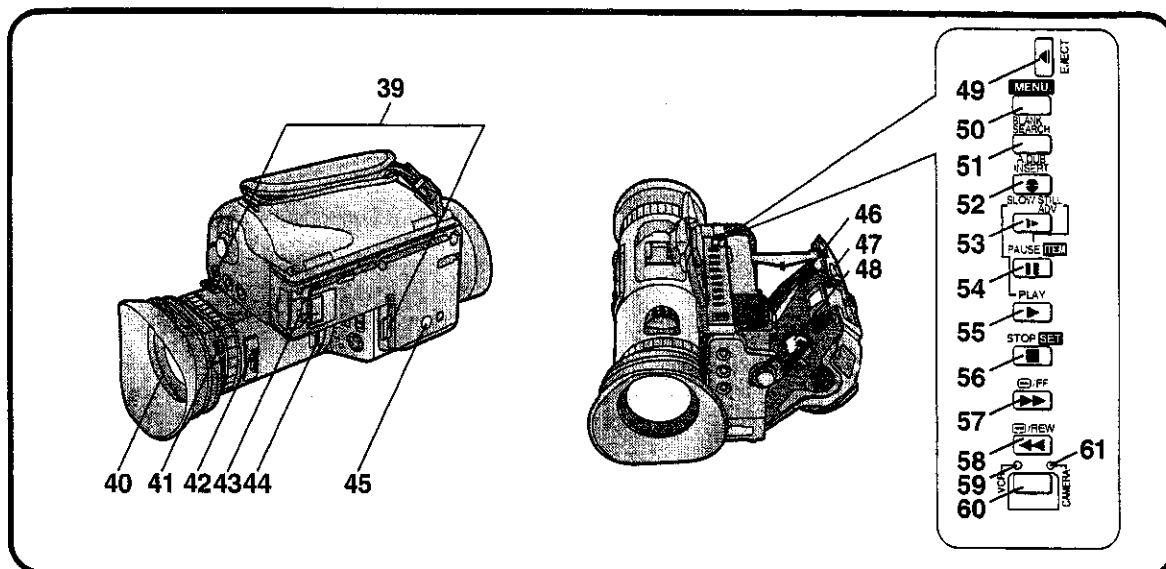
ENGLISH	中 文
39 Shoulder Strap Holders (→ 70)	39 肩用背帶環(→70)
40 Eyecup (→ 22)	40 眼罩(→22)
41 Eyecup Removal Knob (→ 44)	41 眼罩取出鈕(→44)
42 Eyepiece Control (→ 22)	42 目鏡控制(→22)
43 [DC IN] Socket (→ 18)	43 [DC IN]插孔(→18)
44 [BRIGHT −/+] Control (→ 22)	44 [BRIGHT −/+]控制(→22)
45 Tripod Receptacle	45 三角架連接孔
46 Battery Eject Lever (→ 68)	46 電池排出柄(→68)
47 Cassette Compartment [OPEN] Lever (→ 56, 68)	47 磁帶盒[OPEN]柄(→56,68)
48 Button-type Battery Holder (→ 56)	48 鈕扣式電池盒蓋(→56)
49 Cassette [EJECT] Button (→ 20)	49 磁帶[EJECT]柄(→20)
50 [MENU] Button (→ 46, 52)	50 [MENU]鈕(→46,52)
51 [BLANK SEARCH] Button (→ 28)	51 [BLANK SEARCH]鈕(→28)
52 [A.DUB INSERT ≜] Button (→ 124, 128)	52 [A.DUB INSERT ≜]編輯鈕(→124,128)
53 [I►] Slow and Still Advance Button (→ 42)	53 [I►]慢動作和靜止放影鈕(→42)
54 [II] Still Button (→ 40, 42, 124, 128)	54 [II]靜止鈕(→40,42,124,128)
55 [►] Button (→ 40, 42, 124, 128)	55 [►]鈕(→40,42,124,128)
56 [■] Button (→ 34, 128)	56 [■]鈕(→34,128)
57 [►►] Button (→ 38, 40)	57 [►►]鈕(→38,40)
58 [◄◄] Button (→ 34, 38, 40)	58 [◄◄]鈕(→34,38,40)
59 [VCR] Lamp (→ 28, 34, 52)	59 [VCR]燈(→28,34,52)
60 [VCR/CAMERA] Button (→ 28, 34, 46, 52, 124, 128)	60 [VCR/CAMERA]鈕(→28,34,46,52,124,128)
61 [CAMERA] Lamp (→ 24, 34, 46)	61 [CAMERA]燈(→24,34,46)
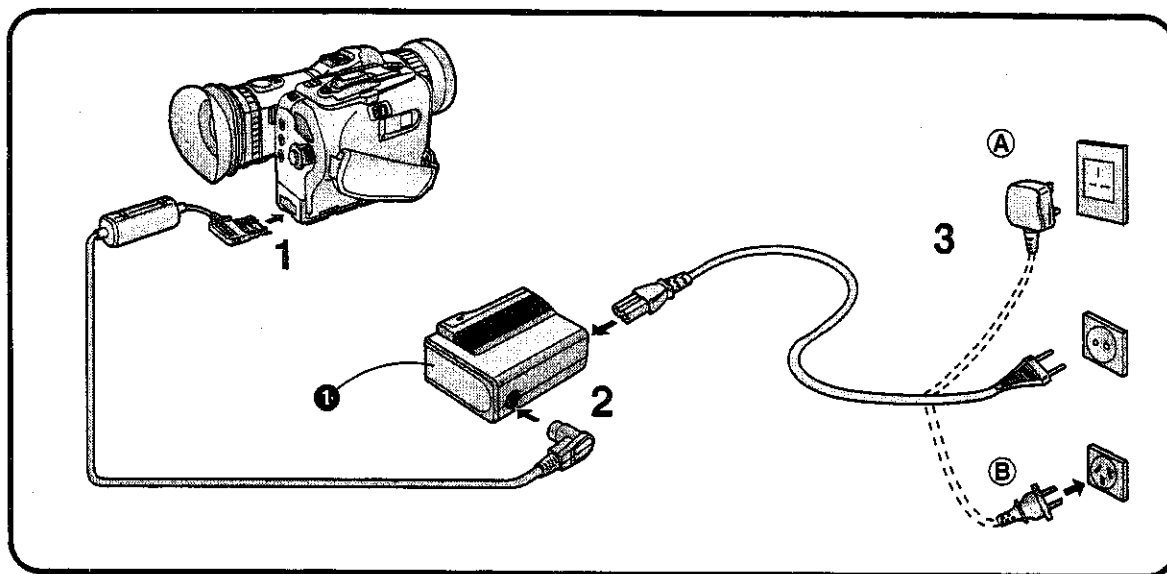
3 Types of Power Supply

You can supply the Movie Camera with power from three different sources.
For trying out the Movie Camera at home, we recommend you to use the AC Adaptor **❶**.

① AC Adaptor (supplied): for using the Movie Camera at home or another place close to an AC mains socket: also for charging the Battery. (→ 64)

② Battery (supplied): for using the Movie Camera outdoors, and also indoors when there is no AC mains socket nearby. (→ 64)

③ Car Battery Charger (optional): for using the Movie Camera in a car.

■ **Using the AC Adaptor as Power Supply Unit**

1 Connect the DC Input Cable to the [DC IN] Socket on the Movie Camera.

2 Connect the other end of the cable to the [DC OUT] Socket on the AC Adaptor.

3 Connect the AC Mains Cable to the AC Adaptor and to an AC mains socket.
Ⓐ: Hong Kong only
Ⓑ: Australia and New Zealand only

There are 3 AC Mains Cables supplied with this Movie Camera. Use the one that fits the AC mains sockets where you use it. Thanks to the AC Adaptor's automatic universal voltage adjustment (AC 100–240 V, 50/60 Hz), there is no need for any adjustments for use in other countries.

三種電源

您可以用三種不同的電源給攝錄影機供電。
為了在家中試拍攝錄影機，建議您使用交流轉換器❶。

① 交流轉換器(附件)：便於在家中或靠近交流主插座的其它地方使用攝錄影機，也可給電池充電。(→64)

② 電池(附件)：便於在室外以及室內附近無交流主插座時使用攝錄影機。(→64)

③ 汽車蓄電池充電器(選購附件)：便於在汽車上使用攝錄影機。

■ **怎樣將交流轉接器當作供電單元使用**

1 將直流輸入纜線連接至攝錄影機上的[DC IN]插孔。

2 將該纜線的另一頭連接至交流轉接器的[DC OUT]插孔。

3 將交流主纜線連接至交流轉換器和交流主插座。
Ⓐ：僅限於香港
Ⓑ：僅限於澳大利亞和新西蘭

本攝錄影機附帶有三種交流主纜線。請使用適合您所用交流主插座的一種。由於交流轉接器具備自動通用電壓調節功能(交流100—240V，50/60Hz)，所以在其它國家使用時也勿須作任何調整。
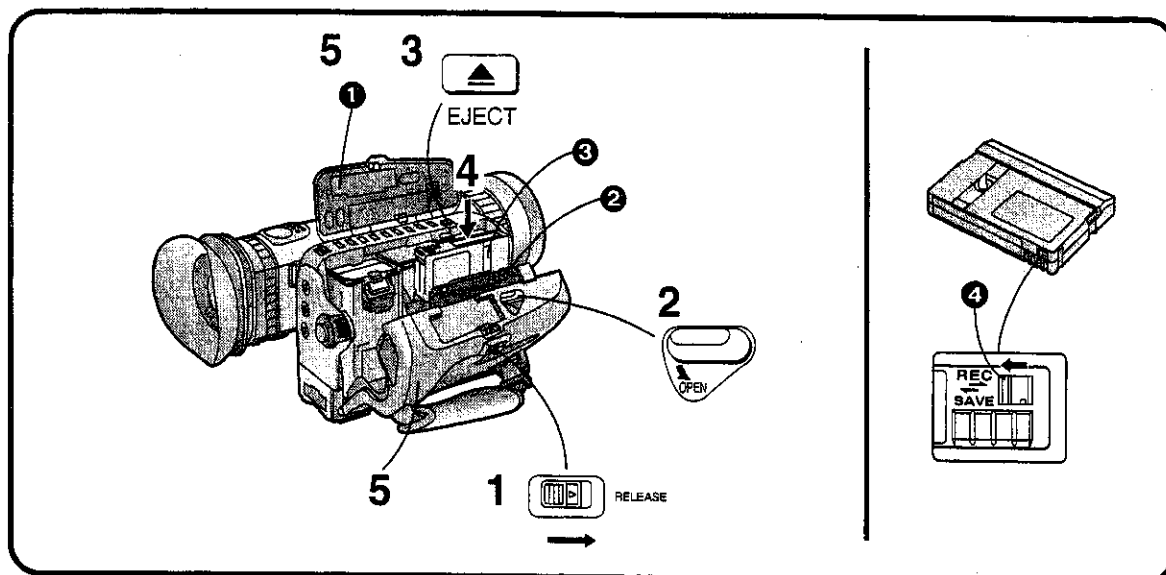
Inserting the Cassette

☞ For inserting the cassette, the Movie Camera must be supplied with power:
Connect the AC Adaptor (→ 18) to the Movie Camera. [Or open the Control Panel Cover and insert the Battery (→ 68).]

1 Slide the [RELEASE] Lever forward.
● The Control Panel Cover ❶ pops open.

2 Turn the [OPEN] Lever in the direction of [OPEN].
● The Cassette Compartment opens.

3 Press the [EJECT] Button.
● After a few seconds, the Cassette Holder ❷ opens completely.

4 Hold the cassette with the cassette window ❸ facing outward as shown above, insert it into the Cassette Holder and push it all the way down.

5 Close first the Cassette Compartment and then the Control Panel Cover.

■ Ejecting the Cassette
Perform steps 1–3 above, and take out the cassette in step 4.

■ Preventing Accidental Erasure of Recordings
♥ Recording on a previously recorded tape erases the previously recorded scenes and sound. To protect important recordings against accidental erasure, open the erasure prevention slider ❹ on the cassette (slide it in the direction of the [SAVE] arrow). To be able to record again on this cassette, close the erasure prevention slider (slide it in the direction of the [REC] arrow).

怎樣插入磁帶

☞ 將交流轉接器(→18)連接至攝錄影機(或插入電池,打開控制板蓋(→68))。(需要電源。)

1 向前滑動 [RELEASE] 柄。
● 控制板蓋 ❶ 會立即彈開。

2 朝 [OPEN] 方向,撥動 [OPEN] 柄。
● 磁帶室蓋打開。

3 按 [EJECT] 鈕。
● 幾秒鐘後,磁帶室蓋 ❷ 完全打開。

4 如上圖所示,拿住磁帶,使磁帶窗口 ❸ 朝外。將其插入磁帶室蓋,並朝下揷到底。

5 首先請關閉磁帶室,然後關閉控制板蓋。

■ 取出磁帶時
請完成上述步驟 1－3,並在步驟 4 取出磁帶。

■ 怎樣防止不慎抹消已錄內容
♥ 在已經攝影的磁帶上重新攝影時,將抹消原來攝製的場景和聲音。為了防止重要的攝影內容被不慎抹消,請打開磁帶上的防消卡 ❹(將其朝[SAVE]箭頭所示方向滑動)。如想再次在該磁帶上攝影時,請關閉防消卡(將其朝[REC]箭頭所示方向滑動)。
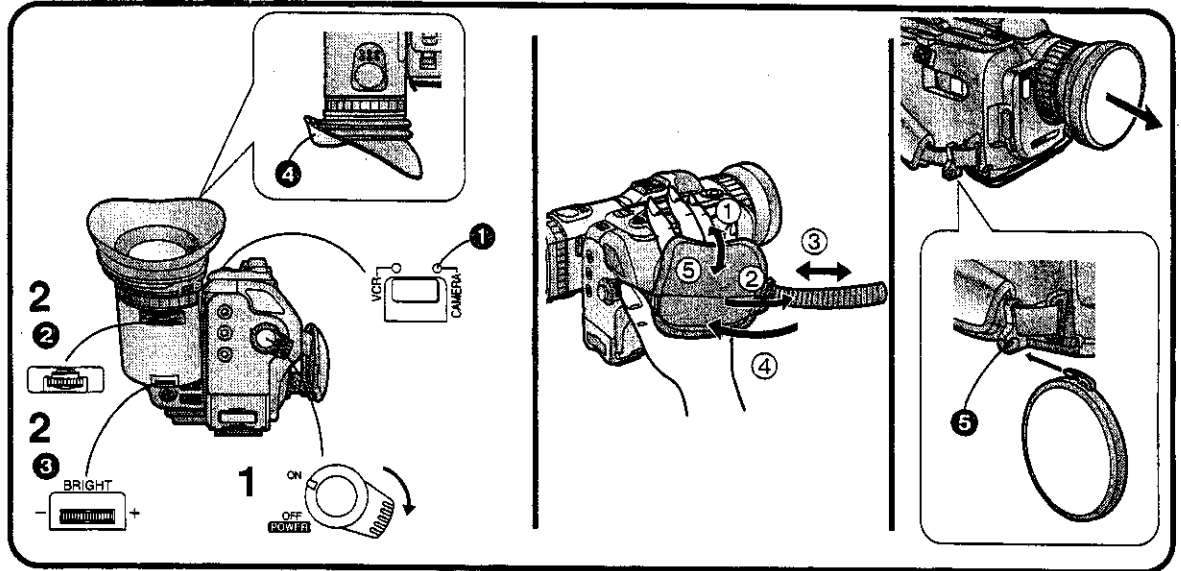
■ Adjusting the Finder

If picture and indications in the Finder are not clear or too bright or dark, this can be remedied by adjusting as follows:

1 Set the [POWER] Switch to [ON].
● The [CAMERA] Lamp ❶ lights.

2 Look in the Finder and adjust with the Eyepiece Control ❷ until the indications are as clear as possible, and adjust the brightness with the [BRIGHT −/+] Control ❸ (both located on the underside of the Finder).

☞ Never aim the Movie Camera with its Finder or Lens directly at the sun; this could damage internal parts of the unit.

■ Adjusting the Eyecup

For viewing with the right eye, bend the left side of the Eyecup ❹ forward. For viewing with the left eye, bend the right side forward.

■ Adjusting the Grip Belt

If the Grip Belt is too loose or tight, adjust it so that you can easily press the Start/Stop Button with your thumb and the [W • T] Zoom Buttons with your index and middle fingers, as shown in the illustration.

■ Handling the Lens Cap

Remove the Lens Cap from the Lens Hood and hook it onto the Grip Belt Loop ❺. This prevents it from getting in front of the Lens during recording.

中　文

■ 怎樣調節尋像器

如果尋像器中的畫面和指示不清晰或太亮、太暗時，可以用下列方法進行調節校正。

1 將 [POWER] 開關設置在 [ON]。
● [CAMERA] 燈❶會亮起。

2 觀看尋像器，並用目鏡校正控制❷進行調節，使指示盡可能清晰，然後用 [BRIGHT−/+] 控制❸調節亮度。

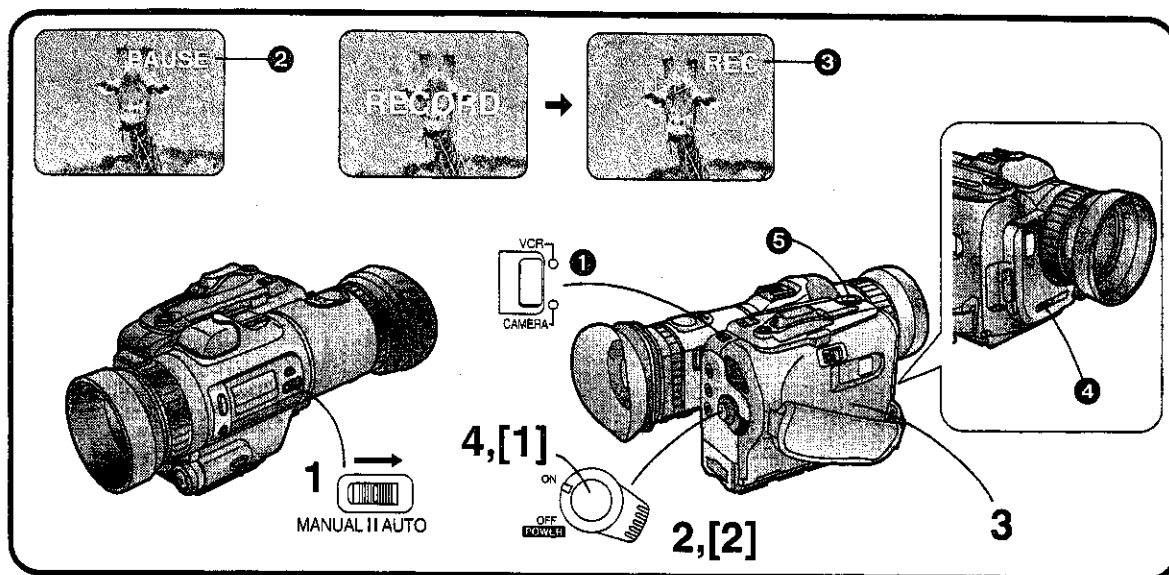☞ 絕對勿將攝錄影機的電子尋像器或鏡頭直接對準太陽，否則會損壞本機的內部零件。

■ 怎樣調節眼罩

用右眼觀看時，請將眼罩❹的左邊朝前彎。用左眼觀看時，請將右邊朝前彎。

■ 怎樣調節扣抓皮帶

如果扣抓皮帶太鬆或太緊時，請如圖所示進行調節，以便用拇指能夠輕鬆地按Start/Stop鈕，以及用食指和中指按[W•T]變焦鈕。

■ 怎樣處理鏡頭蓋

從鏡頭環上取下鏡頭蓋，將其掛在肩用皮帶上(扣環❺)。這將防止攝影中蓋子跑到鏡頭前面。

Basic Recording and Playback

Recording

1 Confirm that the [MANUAL/AUTO] Switch is set to [AUTO].

2 Set the [POWER] Switch to [ON].
  ● The [CAMERA] Lamp **①** lights.

3 Insert a cassette with closed Erasure Prevention Slider (slide it in the direction of the [REC] arrow).
  ● The [PAUSE] Indication **②** appears in the Finder.

4 Press the Start/Stop Button.
  ● Recording starts and the [REC] Indication **③** appears in the Finder. The Tally Lamp **④** on the front of the Movie Camera remains lit during recording.

♥ When you record from a low position, you can also use the auxiliary Start/Stop Button **⑤**.

■ **To Stop Recording:**

[1] Press the Start/Stop Button.
  ● Recording stops and the Movie Camera changes over to the Recording Pause (standby) Mode.

[2] Set the [POWER] Switch to [OFF].

☞ If you do not plan to use the Movie Camera again soon, take out the cassette and disconnect the AC Adaptor.

☞ If you leave the Movie Camera in the Recording Pause Mode for more than 6 minutes, it automatically switches off to protect the tape and to conserve battery power. To resume recording from this condition, set the [POWER] Switch to [OFF] and then to [ON] again.

基本攝影和放影

攝影

1 確認[MANUAL/AUTO]開關已經設定為"AUTO"。

2 將 [POWER] 開關設置在 [ON]。
  ● "CAMERA" 燈**①**亮起。

3 插入防消卡已經關閉的磁帶(將其朝[REC]箭頭所示方向滑動)。
  ● [PAUSE] 指示 **②** 出現於尋像器中。

4 按 Start/Stop 鈕。
  ● 攝影開始進行, 且 [REC] 指示 **③** 出現於尋像器中。攝影中, 攝錄影機前面的識別燈 **④** 將保持亮起。

♥ 當您從較低的位置開始攝影時, 也可使用輔助 Start/Stop 鈕 **⑤**。

■ **停止攝影時**

[1] 按 Start/Stop 鈕。
  ● 攝影停止, 且攝錄影機將變為攝影暫停(待命)狀態。

[2] 將 [POWER] 開關設置在 [OFF]。

☞ 如果不打算立即再使用攝錄影機時, 請取出磁帶, 拔掉交流轉接器。

☞ 如果讓攝錄影機處於攝影暫停狀態超過 6 分鐘時, 它將自動關閉, 以便保護磁帶和節省電池能量。從此種狀態下恢復攝影時, 請將[POWER]開關設置在[OFF], 然後再次設置在[ON]。
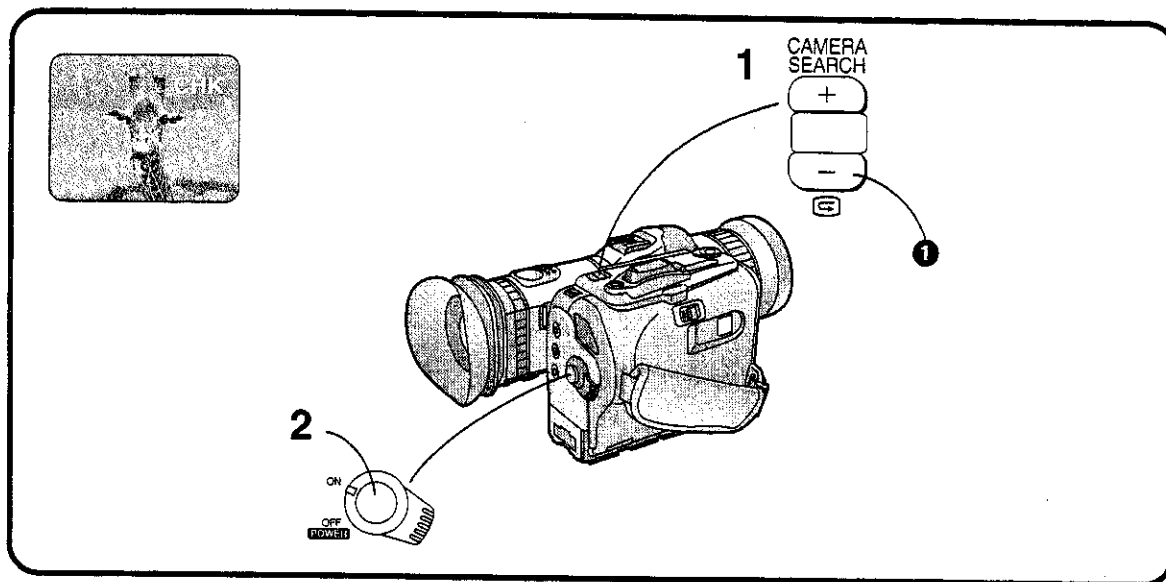
Checking the End of a Recorded Scene

For especially important scenes, use this function from time to time to confirm that recording has been performed correctly.

With the Movie Camera in the Recording Pause Mode(standby mode), look in the Finder and briefly press the [CAMERA SEARCH −] Button ❶.

●The [CHK] Indications appears in the Finder and the final approx. 2 seconds of the last recorded scene are played back in the Finder. After that, the Movie Camera returns to the Recording Pause Mode.
([CHK] means CHECK.)

■ Smoothly Joining a New Scene to a Previously Recorded Scene

This function makes it possible to smoothly join a new recording to a previously recorded scene. It lets you play back the tape at high speed in forward or reverse direction to quickly locate the point in the previous scene where you want to start with the new scene.

1 With the Movie Camera in the Recording Pause Mode, look in the Finder and keep pressing the [CAMERA SEARCH −] Button (or the [CAMERA SEARCH +] Button) to search for the point where you want to join the new recording. Release the button as soon as you have found this point.

2 Press the Start/Stop Button.
●You have started recording the new scene, and this erases the end of the previously recorded scene.

怎樣檢查錄過場景的結尾部分

該功能可讓您檢查攝影是否成功。為了進行精確攝影，請重復使用該功能，並確認攝影是否已經正確進行。

使攝錄影機處於攝影暫停狀態(待命狀態)，觀看尋像器，並短暫地按 [CAMERA SEARCH −] 鈕❶。

●[CHK]指示出現於尋像器中，且尋像器中將播放上次錄過的最後約2秒鐘的場景。之後，攝錄影機將恢復攝影暫停狀態。
([CHK]意思為CHECK。)

■ 怎樣在以前錄過的場景後面圓滑地接錄新場景

該功能可以在以前錄過的場景後面圓滑地接錄新場景。它可以高速前後快進或倒轉磁帶，使您能迅速地在以前錄過的場景中，位於打算接錄新場景之點。

1 使攝錄影機處於攝影暫停狀態，觀看尋像器，並持續按住 [CAMERA SEARCH −] 鈕(或 [CAMREA SEARCH +]鈕)，檢索您打算接錄新場景的位置。當您發現該位置，請立即鬆開按鈕。

2 按Start/Stop鈕。
● 新場景的拍攝開始進行，且新場景會抹消以前錄過場景的結尾。
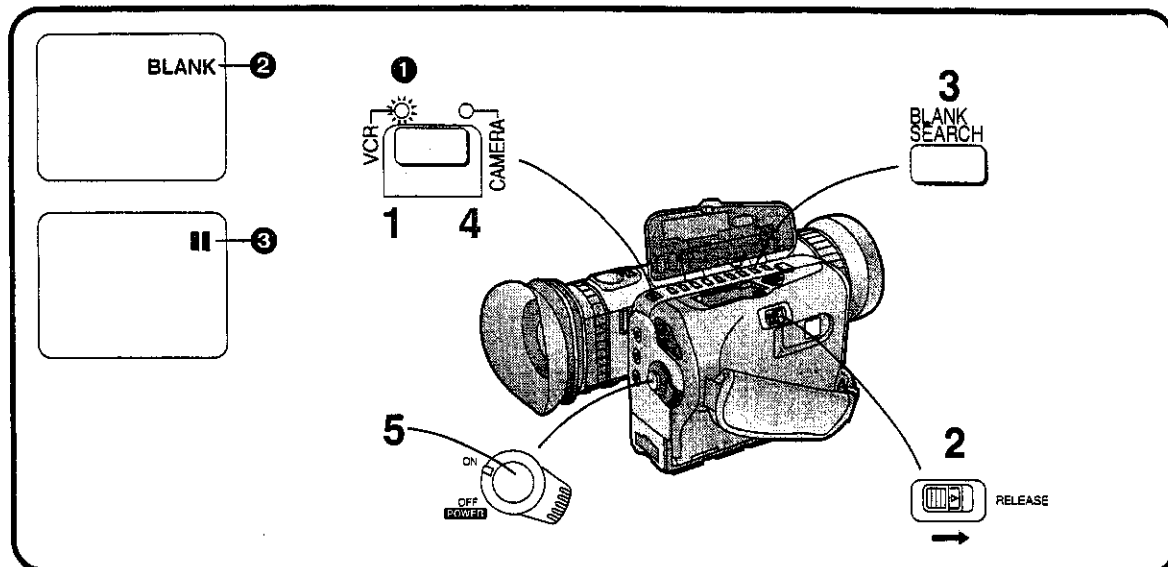
Locating the End of the Recorded Part on a Cassette (Blank Search)

With the Blank Search Function you can quickly locate the end of the recorded part on a cassette (or a blank part between recordings) and stop slightly before the end of the recorded part.

1 Press the [VCR/CAMERA] Button to select the [VCR] Mode.
●The [VCR] Lamp ❶ lights.

2 Slide the [RELEASE] Lever forward.
●The Control Panel Cover pops open.

3 Press the [BLANK SEARCH] Button.
●The [BLANK] Indication ❷ appears in the Finder.
●When the Blank Search has finished, the Movie Camera switches over to the Still Playback Mode and the [ⅠⅠ] Indication ❸ appears in the Finder.

4 Press the [VCR/CAMERA] Button to select the [CAMERA] Mode.

5 Press the Start/Stop Button to start recording the next scene.

怎樣位於磁帶上已錄場景部分的結尾(空白尋像)

使用空白尋影功能,便可迅速地位於磁帶上已錄部分的結尾(或攝影之間的空白部分),並停在已錄部分的稍前位置。

1 按 [VCR/CAMERA] 鈕,選擇 [VCR] 狀態。
●[VCR] 燈❶亮起。

2 向前滑動 [RELEASE] 柄。
●控制板蓋彈開。

3 按 [BLANK SEARCH] 鈕。
●[BLANK] 指示❷出現於尋像器中。
●當空白尋影結束時,攝錄影機將變爲靜止放影狀態,且 [ⅠⅠ] ❸指示會出現於尋像器中。

4 按 [VCR/CAMERA] 鈕,選擇 [CAMERA] 狀態。

5 按Start/Stop鈕,開始拍攝下一個場景。
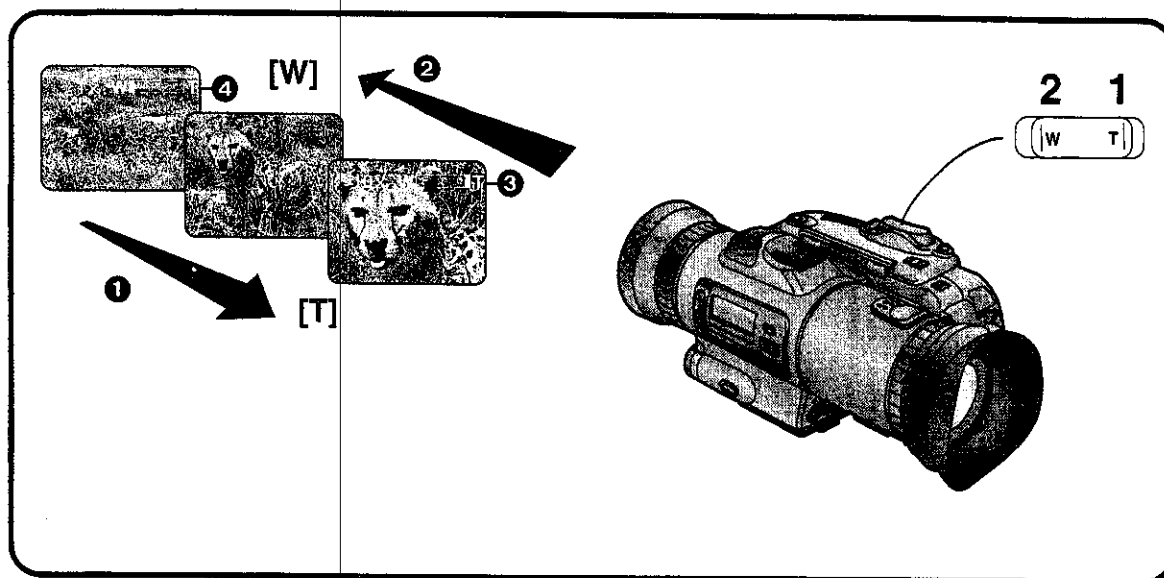
ENGLISH

Zooming In/Out

Zooming in lets you record close-ups of subjects ❶ and zooming out lets you record wider views ❷.
([W] means Wide and [T] means Tele.)

☞ Avoid too much zooming during recording as it tends to give videos an unprofessional look.

■ Zooming in:

1 Press the [T] Zoom Button to zoom in.
  ●The subject becomes bigger in the Finder and the Zoom Gauge/Magnification Indication ❸ is displayed.

■ Zooming out:

2 Press the [W] Zoom Button to zoom out.
  ●The subject becomes smaller in the Finder and the Zoom Gauge/Magnification Indication ❹ is displayed.

■ You have the choice between two zoom ranges:

1× to 10×: Optical zoom only
1× to 20×: 1× to 10× optical and 10× to 20× digital
♥ Selecting the desired zoom range is possible in the Camera Mode Menu (→ 46).
♥ The zooming speed is variable. The stronger you press the [W] or [T] Zoom Button the faster the zooming speed becomes.
♥ In the maximum telephoto setting (when you have zoomed in), precise focusing is only possible for subjects that are more than 1.2 m from the lens.

中 文

拉近／拉遠

拉近功能可讓您拍攝目標物的放大特寫❶，而拉遠功能則可讓您拍攝廣角視野❷。([W]意思為廣角，[T]意思為長角。)

☞ 攝影中最好避免變焦過多，以免使影像看起來像生手所拍。

■ 怎樣拉近：

1 按 [T] 變焦鈕，進行拉近。
  ●尋像器中的目標物變得更大，並會出現變焦計/放大率指示❸。

■ 怎樣拉遠：

2 按 [W] 變焦鈕，進行拉遠。
  ●尋像器中的目標物變得更小，並會出現變焦計/放大率指示❹。

■ 您可從兩種變焦範圍中進行選擇：
1倍—10倍：僅光學變焦
1倍—20倍：1倍—10倍為光學變焦，10倍—20倍為數位變焦
♥ 可以在攝錄影機條目狀態下選擇需要的變焦範圍(→46)。
♥ 變焦速度是可變的。用力按 [W] 或 [T] 鈕時，變焦速度會加快。
♥ 在最大的攝遠位置(拉近時)，只有對離鏡頭大於1.2m的目標物才能進行精確的聚焦。
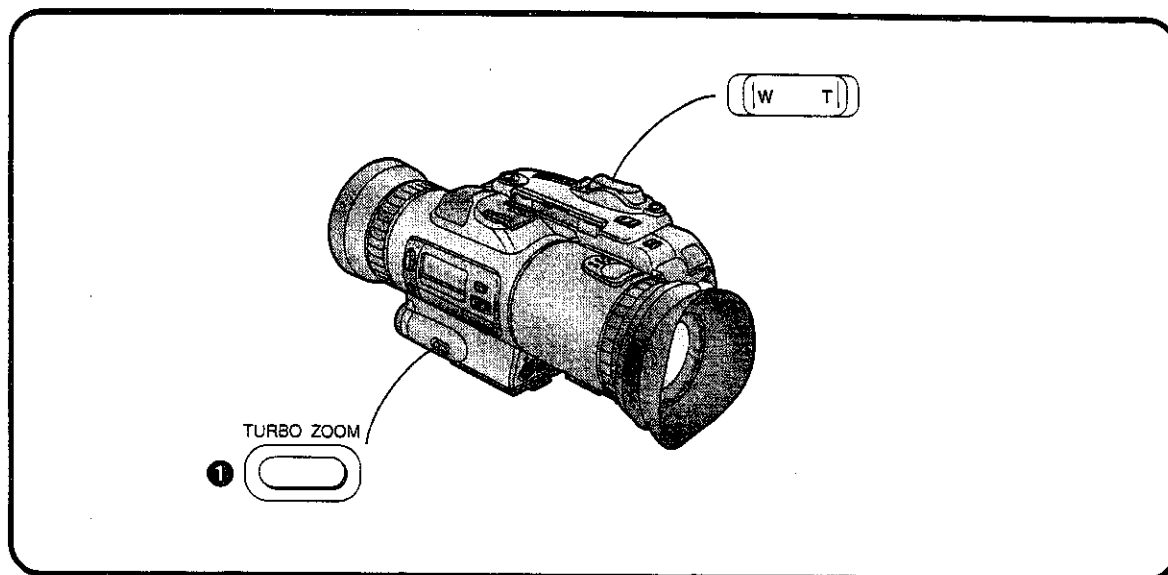
■ For Extra-quick Framing

This function lets you zoom extra-quickly.
Before recording, keep pressing the [TURBO ZOOM]
Button ❶ while pressing the [W] or [T] Zoom Button.

☞ The Turbo Zoom Function does not work during
recording.

☞ During turbo-zooming, the subject may temporarily go
out of focus. However, this is not a malfunction.

■ Using the Macro Close-up Function

This functions lets you record very small subjects such
as insects.

After keeping the [W] Zoom Button pressed to zoom to
the maximum wide-angle setting, approach the subject
with the Movie Camera until it has the desired size in the
picture.

●The Movie Camera can automatically focus subjects
down to a minimum distance of only 15 mm between
lens and subject.

☞ To prevent unstable pictures, use a tripod (optional)
for macro close-up recording.

■ 特快取景

該功能可讓您進行特快變焦。

攝影之前，請一邊按住 [W] 或 [T] 變焦鈕，一邊持續按住
[TURBO ZOOM] 鈕❶。

☞ 攝影中，渦輪變焦功能不起作用。

☞ 志渦輪變焦中，目標物可能會暫時不清晰。然而，這並非
故障。

■ 怎樣使用微距放大功能

該功能可讓您拍攝昆蟲之類的非常細小的目標物。

按住 [W] 變焦鈕，變焦至最大廣角位置，將攝錄影機靠近目
標物，使其位於畫面中需要的位置。

●攝錄影機會自動進行目標物的聚焦，鏡頭和目標物之間的
最小距離可達15mm。

☞ 為了避免畫面不穩，請在微距放大攝影中使用三角架（選
購附件）。

Playback

■ Playing Back in the Finder

You can watch playback of the recorded scenes in the Finder.

If you want to listen to the playback sound, connect stereo earphones or headphones to the [PHONES] Socket ❶.
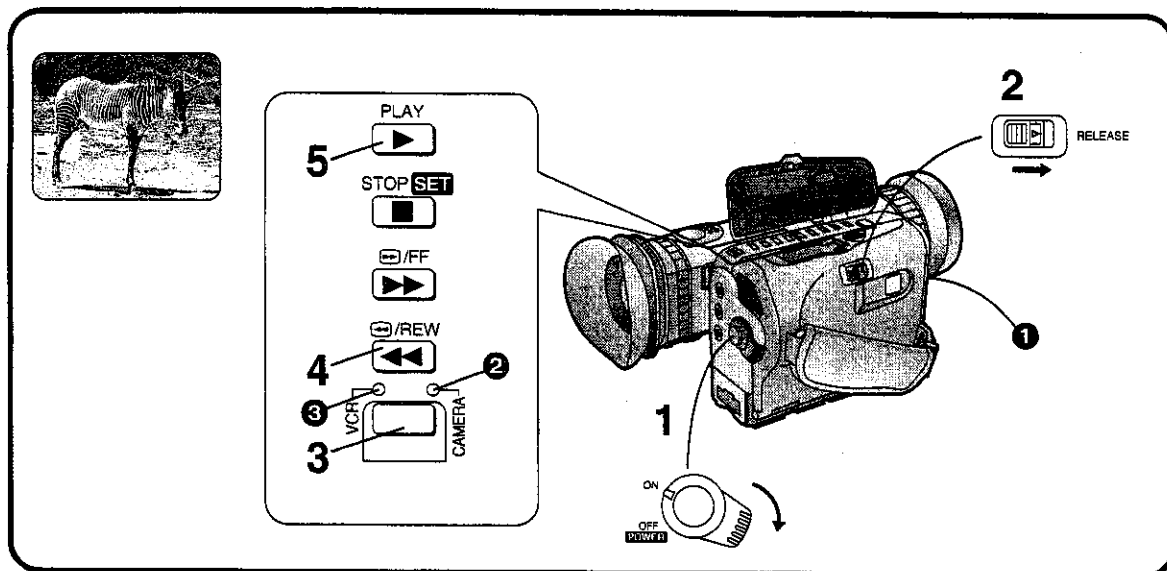
☞ However, the sound is played back only in the Normal Playback Mode.

1 Set the [POWER] Switch to [ON].
●The [CAMERA] Lamp ❷ lights.

2 Slide the [RELEASE] Lever forward.
●The Control Panel Cover pops open.

3 Press the [VCR/CAMERA] Button to select the [VCR] Mode.
●The [VCR] Lamp ❸ lights.

4 Press the [◄◄] Button.
●The tape starts to rewind. When the beginning of the tape is reached, the rewinding automatically stops.

5 Press the [►] Button.
●Playback starts and the [▷] Indication appears in the Finder. When the tape reaches the end, it automatically rewinds to the beginning.

■ To stop playback:
Press the [■] Button.

■ To Play Back Repeatedly:
Keep pressing the [►] Button for more than 5 seconds.
●The [R ▷] Indication appears in the Finder. The tape is repeatedly played back from the beginning to the end until you set the [POWER] Switch to [OFF].
([R] means Repeat.)

中　文

放影

■ 怎樣在尋像器中放影

您可以在尋像器中觀看已錄場景的放影。

如果您想聽見播放的聲音時，請將立體聲耳機或頭戴耳機連接至 [PHONES] 插孔❶。

☞ 但是，只有在標準放影狀態下，才能播放聲音。

1 將 [POWER] 開關設置在 [ON]。
● [CAMERA] 燈❷亮起。

2 向前滑動 [RELEASE] 柄。
●控制板蓋彈開。

3 按 [VCR/CAMERA] 鈕，選擇 [VCR] 狀態。
● [VCR] 燈❸亮起。

4 按 [◄◄] 鈕。
●磁帶開始倒轉。當磁帶到頭時，會自動停止倒轉。

5 按 [►] 鈕。
●放影開始進行，[▷] 指示出現於尋像器中。當磁帶到尾時，將自動倒轉到頭。

■ 停止放影時：
請按 [■] 鈕。

■ 重復放影時：
請持續按住 [►] 鈕5秒鐘以上。
●[R ▷] 指示出現於尋像器中。將從頭到尾，重復播放磁帶，直至您將 [POWER] 開關設置在 [OFF] 爲止。
([R]意思爲重復。)

3 **2**

[S-VIDEO IN] [VIDEO IN]

[OUTPUT]

[AUDIO IN]

1
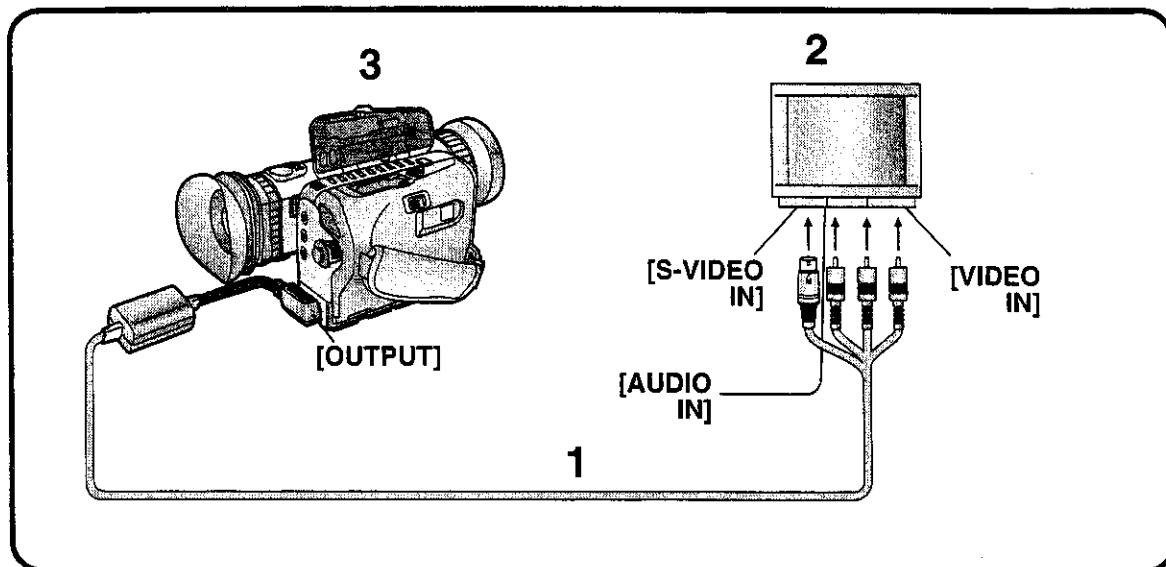
■ Playback on a TV

By connecting the Movie Camera to a TV, you can play back the recorded scenes on the TV.

☞ Before connecting, turn off both the Movie Camera and the TV for safety.

1 Use the supplied Multi AV Cable to connect the [OUTPUT] Socket on the Movie Camera with the TV, as shown above.

♥ If the TV is equipped with an S-Video Socket, also connect the black S-Video plug.

2 Select the channel on the TV which corresponds with the Video/Audio Input Sockets used for connecting (for selecting, refer to the operating instructions for your TV).

3 Perform playback operations on the Movie Camera. (➔ 34)

■ To Display the Function and Operation Indications in the Finder on the TV Screen as well:

Press the [OSD] Button on the Remote Controller. (➔ 112) ([OSD] means On Screen Display.)

●The Indication in the Finder are now displayed on the TV screen, too.

■ 怎樣在電視機上放影

將攝錄影機連接至電視機後，便可在電視機上播放拍攝的場景。

☞ 連接之前，爲了安全起見，須關閉攝錄影機和電視機。

1 如上圖所示，用附帶的多用AV纜線，將攝錄影機上的 [OUTPUT] 插孔連接至電視機。

♥如果電視機具備S影像插孔，也須連接黑色S影像插頭。

2 請根據連接所用的影像／音頻輸入插孔情況，選擇電視機的頻道(有關選擇方法，請參看電覗機的使用說明書)。

3 進行攝錄影機的放影操作。(➔34)

■ 怎樣在電視屏幕上同樣顯示出尋像器中的功能和操作指示：

按遙控器上的 [OSD] 鈕。(➔112)
([OSD]意思爲屏幕顯示。)
●尋像器中的指示也會顯示在電視屏幕上。
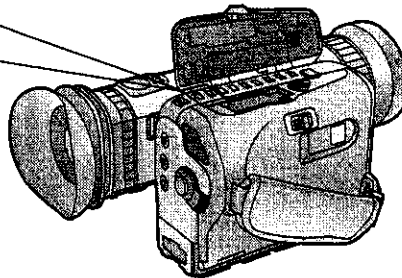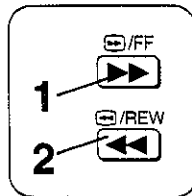
■ Fast-Forward or Rewinding the Tape

☞ Perform the following operations with the Movie Camera in the [VCR] Mode (the [VCR] Lamp lights) and in the Stop Mode.

■ Fast-Forwarding

1 **To wind the tape forward at high speed: Press the [▶▶] Button.**

●When the tape reaches the end, it automatically rewinds to the beginning.

♥ To check the progress of the fast-forwarding, simply keep the [▶▶] Button pressed for a few second so you can view the picture.

■ Rewinding

2 **To rewind the tape at high speed: Press the [◀◀] Button.**

●When the tape reaches the beginning, the rewinding automatically stops.

♥ To check the progress of the rewinding, simply keep the [◀◀] Button pressed for a few seconds so you can view the picture.

■ 怎樣快進或倒轉磁帶

☞ 請在攝錄影機處於[VCR]狀態([VCR]燈亮起)和停止狀態下, 進行下列操作。

■ 怎樣快進

1 要向前高速倒轉磁帶時:
請按 [▶▶] 鈕。

●當磁帶到尾時, 它將自動倒轉到頭。

♥想檢查快進動作狀態時, 只需簡單地按 [▶▶] 鈕幾秒鐘, 便可觀看畫面。

■ 怎樣倒帶

2 要高速倒轉磁帶時:
請按 [◀◀] 鈕。

●當磁帶到頭時, 它將自動停止。

♥想檢查倒帶動作狀態時, 只需簡單地按 [◀◀] 鈕幾秒鐘, 便可觀看畫面。
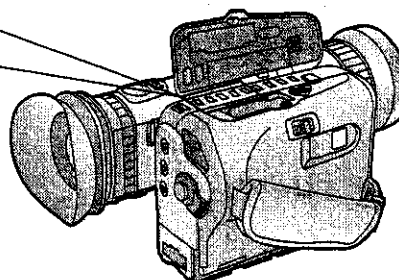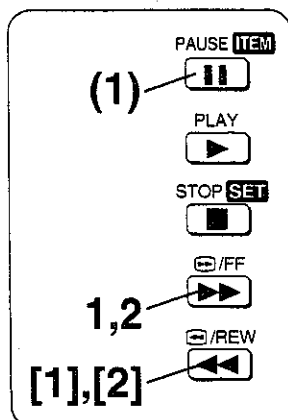
■ **Cue, Review and Still Playback**

☞ Perform the following operations with the Movie Camera in the [VCR] mode ([VCR] Lamp lights) and in the Normal Playback Mode.

■ **Cue Playback**

1 **For short-time Cue Playback:**
Keep pressing the [►►] Button.
●To Resume Normal Playback:
Release this button.

2 **For long-time Cue Playback:**
Briefly press the [►►] Button.
●To Resume Normal Playback:
Press the [►] Button.

■ **Review Playback**

[1] **For short-time Review Playback:**
Keep pressing the [◄◄] Button.
●To Resume Normal Playback:
Release this button.

[2] **For long-time Review Playback:**
Briefly press the [◄◄] Button.
●To Resume Normal Playback:
Press the [►] Button.

☞ Before and after Cue Playback and Review Playback, the screen may become momentarily black.
☞ In Cue and Review Playback, pictures with fast-moving subjects may contain mosaic-like patterns.

■ **Still Playback**

(1) **Press the [❚❚] Button.**
●To Resume Normal Playback:
Press the [►] or the [❚❚] Button.

☞ If you leave the Movie Camera in the Still Playback Mode for about 6 minutes, it automatically switches over to the Stop Mode.

■ 快進尋影、倒帶尋影和靜止放影

☞ 請在攝錄影機處於VCR([VCR]燈亮起)和標準放影狀態下,進行下列操作。

■ 快進尋影

1 進行短時間快進尋影時:
持續按住 [►►] 鈕。
● 恢復標準放影時:
請鬆開該鈕。

2 進行長時間快進尋影時:
短暫地按 [►►] 鈕。
● 恢復標準放影時:
請按 [►] 鈕。

■ 倒帶尋像

[1] 進行短時間倒帶尋影時:
持續按住 [◄◄] 鈕。
● 恢復標準放影時:
請鬆開該鈕。

[2] 進行長時間倒帶尋影時:
短暫地按 [◄◄] 鈕。
● 恢復標準放影時:
請按 [►] 鈕。

☞ 在快進尋影和倒帶尋影之前後, 屏幕可能會暫時變黑。
☞ 在快進尋影和倒帶尋影中, 具有快速移動目標物的畫面, 可能會有像拼湊起來的圖案。

■ 靜止放影

(1) 按 [❚❚] 鈕。
● 恢復標準放影時:
請按 [►] 或 [❚❚] 鈕。

☞ 如果讓攝錄影機處於靜止放影狀態約6分鐘時, 它將自動切換至停止狀態。
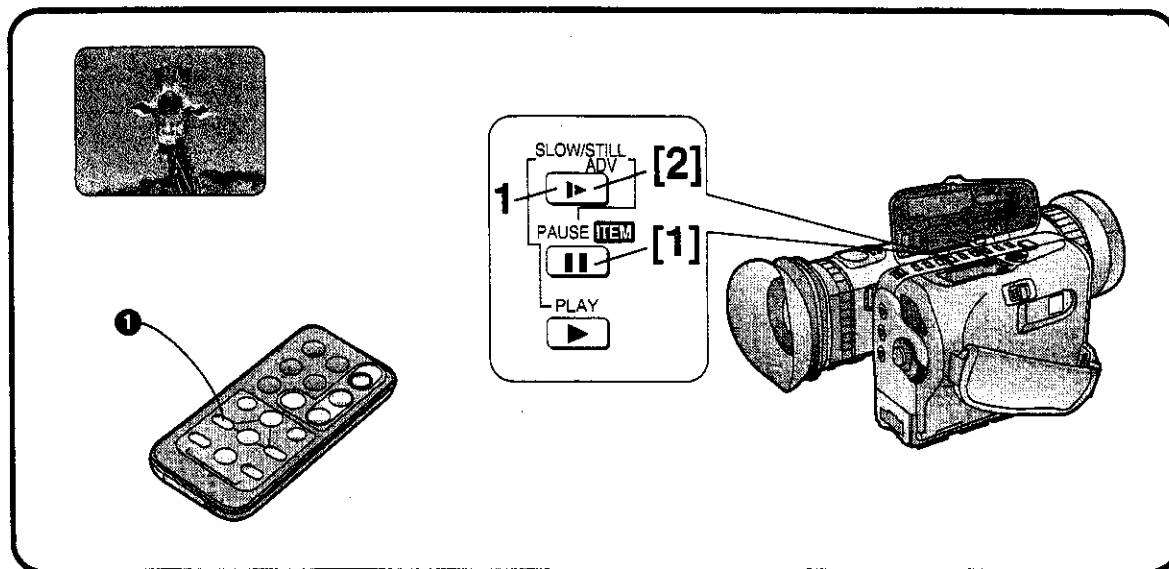
■ **Slow Motion and Still Advance Playback**

☞ Perform the following operations with the Movie Camera in the [VCR] Mode and in the Normal Playback Mode.

■ **Slow Motion Playback**

1 **Press the [I▶] Button.**
  ●Slow Motion Playback starts.

♥ With the [◀I SLOW/STILL ADV] Button ❶ on the Remote Controller, slow motion playback in reverse direction is also possible.

■ **To Resume Normal Playback:**
Press the [▶] Button.

■ **Still Advance Playback**

[1] **Press the [I I] Button.**
[2] **Press the [I▶] Button.**
  ●Pressing the [I▶] Button advances the picture frame by frame.

♥ If you keep pressing the [I▶] Button for more than one second, the Movie Camera also changes over to slow motion playback. In this case, however, the playback speed is slower than that in the normal Slow Motion Playback Mode.

♥ With the [◀I SLOW/STILL ADV] Button ❶ on the Remote Controller, still advance playback in reverse direction is also possible.

■ **To Resume Normal Playback:**
Press the [▶] Button.

■ 慢動作和靜止步進放影

☞ 請在攝錄影機處於[VCR]和標準放影狀態下，進行下列操作。

■ 慢動作放影

1 按 [I▶] 鈕。
  ●慢動作放影開始進行。

♥用遙控器上的 [◀I SLOW/STILL ADV]鈕❶，也可進行反向慢動作放影。

■ 恢復標準放影時：
請按 [▶] 鈕。

■ 靜止步進放影

[1] 按 [I I] 鈕。
[2] 按住 [I▶] 鈕。
  ●按 [I▶] 鈕，使畫面一幀一幀地前進。

♥如果您持續按住 [I▶] 鈕1秒鐘以上，攝錄影機將變爲慢動作放影。然而，在此情況下，放影速度會慢於標準慢動作放影狀態時的速度。
♥用遙控器上的 [◀I SLOW/STILL ADV]鈕❶，也可進行反向靜止步進放影。

■ 恢復標準放影時：
請按 [▶] 鈕。
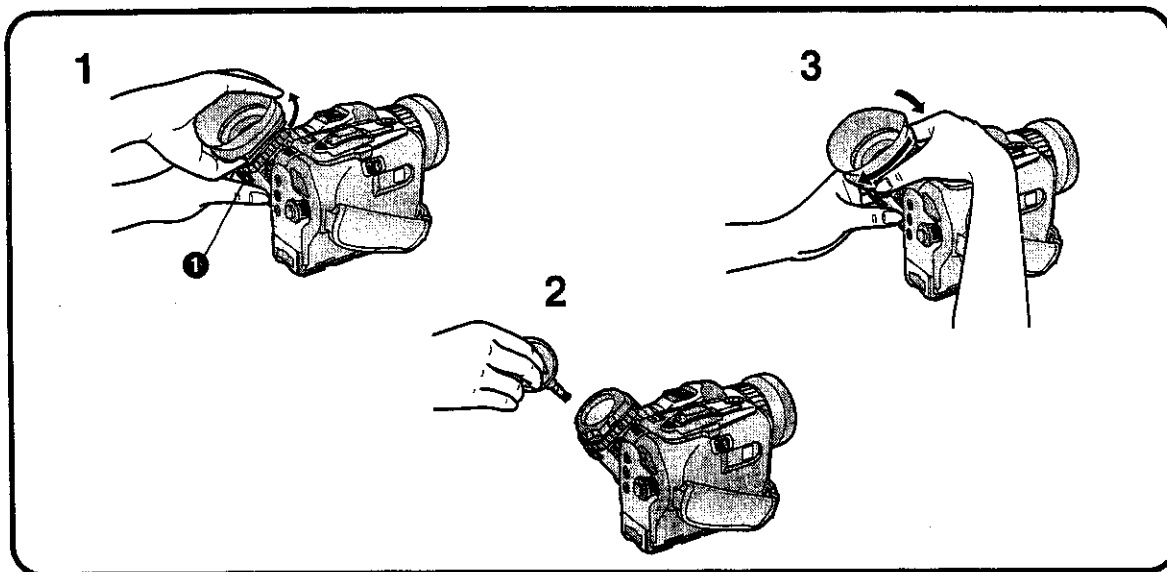
After Use

After Use, take out the cassette and then set the [POWER] Switch to [OFF]. Disconnect the Movie Camera from the AC Adaptor. (If you have used the Battery instead of the AC Adaptor to power the Movie Camera (→ 68), take it out after setting the [POWER] Switch to [OFF].)

■ **Cleaning the Movie Camera**

■ **Cleaning the Finder**

If dust has entered the Finder...

1 While pushing the Eyecup Removal Knob ❶ upward with your thumb, turn the Eyecup in the direction of the arrow and remove it.

2 Remove dust with a blower brush.

3 Re-insert the Eyecup and turn in clockwise.

■ **Cleaning the Movie Camera Body**

Wipe it with a clean, dry cloth.

☞ Do not use cleaning fluid, benzine, thinner or other chemicals for cleaning, because they could change the colour and damage the surface of the camera body.

☞ When using a chemically treated cloth for cleaning, carefully follow the instructions for its use.

■ **Cleaning the Lens**

Clean the lens with supplied Lens Cleaning Tissue or a blower brush.

使用之後

使用之後,請取出磁帶,然後將[POWER]開關設置在[OFF]。斷開攝錄影機和交流轉接器的連接(如果您未使用交流轉接器,而是用電池給攝錄影機供電時(→68),請將[POWER]開關設置在[OFF],然後取出電池。)

■ 怎樣清潔攝錄影機

■ 怎樣清潔尋像器

如果尋像器中有灰塵……

1 用拇指向上按眼罩取出鈕❶,依箭頭方向轉動眼罩,將其取出。

2 用吹氣刷去掉灰塵。

3 重新插入眼罩,將其順時針旋轉。

■ 怎樣清潔攝錄影機機體

請用清潔的乾布擦拭。

☞ 勿使用揮發劑、稀釋劑或其他化學藥品進行清潔,因為可能會引起攝錄影機機體退色或表面受損。

☞ 使用化學處理布進行清潔時,要小心地遵照其說明書進行使用。

■ 怎樣清潔鏡頭

用吹風刷或附帶的鏡頭紙來清潔鏡頭。
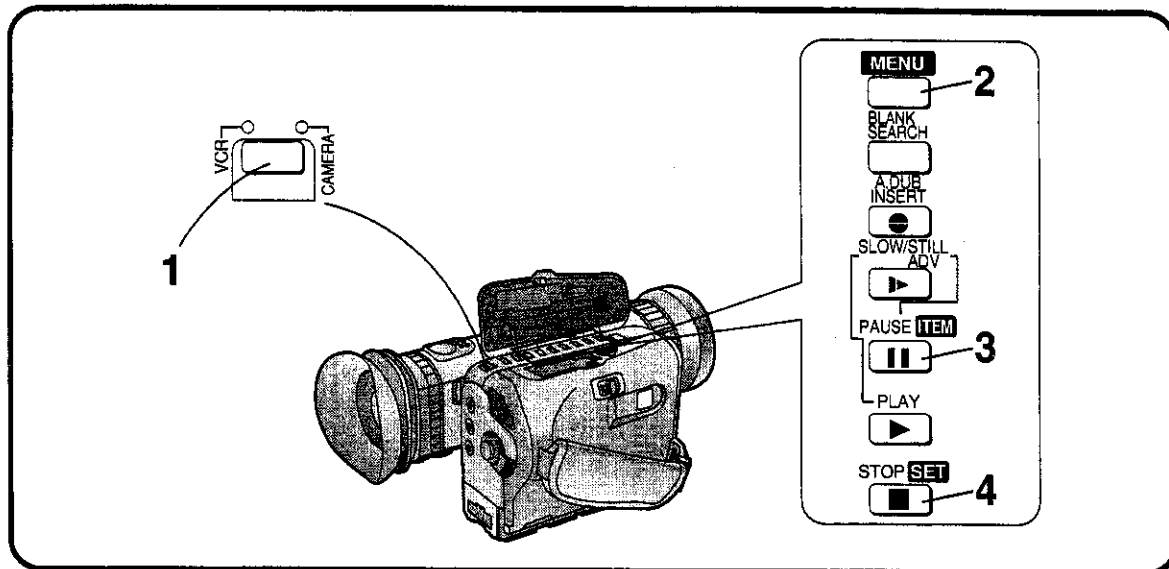
Getting Ready to Go Recording Outside

☞ Such basic operations as supplying the power (with AC Adaptor or Battery) to the Movie Camera, inserting the cassette, etc. are omitted hereafter.

Using the Menu Function

This Movie Camera offers a wide range of functions. Menus of such functions can be displayed in the Finder and from these you can select functions that you want to use.

These functions are grouped in two menus:

1) Camera Mode Menu (for recording functions)
2) VCR Mode Menu (for playback functions)

1) Using the Camera Mode Menu

1 Press the [VCR/CAMERA] Button so that the [CAMERA] Lamp lights.

2 Press the [MENU] Button.
● The Camera Mode Menu appears in the Finder.

3 Press the [ITEM] Button repeatedly until the desired Item is highlighted.

4 Press the [SET] Button to select the desired mode.
● The [▶] mark indicates the selected mode.

■ **To End the Menu Function:**
Press the [MENU] Button again.

作好外出攝影準備

☞ 一些基本操作, 如給攝錄影機供電 (用交流轉接器或電池)、插入磁帶等, 將留待後述。

怎樣使用條目

該攝錄影機可提供廣泛的功能。這些功能條目會出現在尋像器中, 您可從中選擇自己要使用的功能。
這些功能被安排在兩種狀態中:

1) 攝錄影機狀態條目 (用於攝影功能)
2) VCR狀態條目 (用於放影功能)

1) 怎樣使用攝錄影機狀態條目

1 按 [VCR/CAMERA] 鈕, 使 [CAMERA] 燈亮起。

2 按 [MENU] 鈕。
● 攝錄影機狀態條目出現於尋像器中。

3 重復按 [ITEM] 鈕, 直到需要的項目亮起。

4 按 [SET] 鈕, 選擇需要的狀態。
● [▶] 標誌表示選擇的狀態。

■ 結束條目功能時:
再次按 [MENU] 鈕。

```
                    M E N U
① D.ZOOM          ▶ OFF      ON
② AUDIO REC       ▶ 12bit    16bit
③ SCENE INDEX     ▶ 2HOUR    DAY
④ REMOTE          ▶ VCR1  VCR2  OFF
   REC LAMP       ▶ ON       OFF
   REC MODE       ▶ NORMAL   FRAME
   CLOCK SET      ▶ OFF      ON
        PRESS MENU TO EXIT
```

■ **Camera Mode Menu**

The ◆ mark indicates the initial setting.

① D.ZOOM

For turning the Digital Zoom ON or OFF
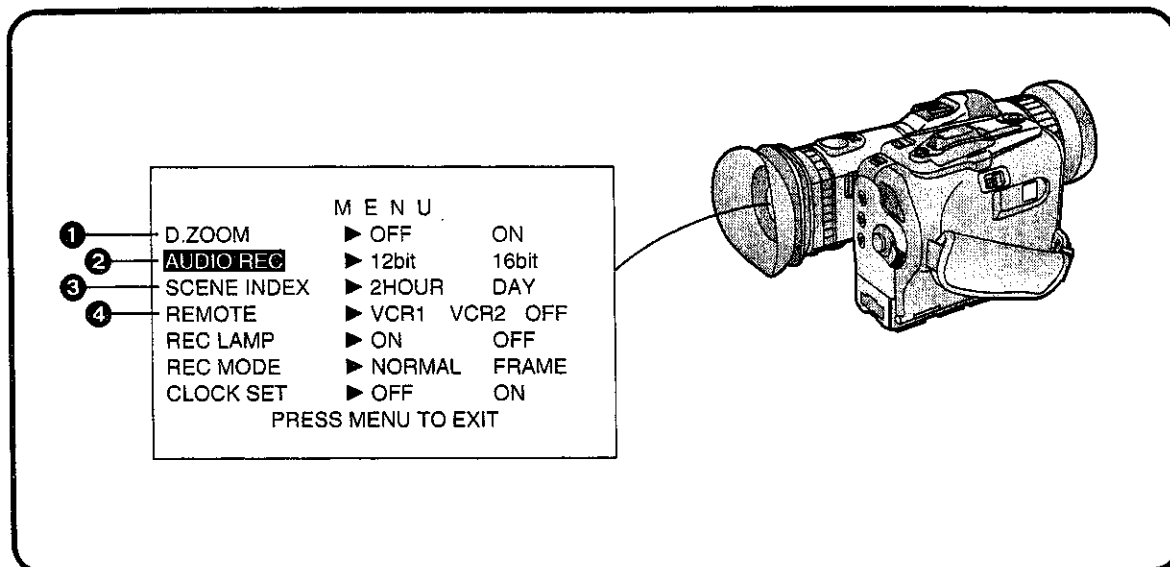
ON: Optical zooming from 1× to 10× and digital zooming from 10× to 20×. Automatic switching from optical to digital.

◆ OFF: Optical zooming from 1× to 10×.

② AUDIO REC

For selecting the desired audio recording mode (→ 130, 146)

12bit: Recording is made in 12-bit/32-kHz Mode.

16bit: Recording is made in 16-bit/48-kHz Mode.

③ SCENE INDEX

For performing index search (→ 120)

◆ 2HOUR: Index signal is recorded when recording is restarted after a lapse of more than 2 hours.

DAY: Index signal is recorded when recording is restarted after date has changed since last recording.

④ REMOTE

For selecting different Remote Controller Modes when using two Movie Cameras. (→ 108)

◆ VCR1: Remote Controller Mode 1

VCR2: Remote Controller Mode 2

OFF: Movie Camera cannot be operated with Remote Controller.

中　文

■ 攝影之前，您可在攝錄影機狀態條目中，進行下列設定：

◆標誌表示初期設定。

① D.ZOOM（數位變焦）

用於啓動或關閉數位變焦功能。

ON: 1倍～10倍的光學變焦和10倍～20倍的數位變焦。將自動從光學變焦切換至數位變焦。

◆ OFF: 1倍～10倍的光學變焦。

② AUDIO REC（音頻攝錄）

用於選擇需要的音頻攝錄狀態（→130,146）。

12畢特：以12畢特/32kHz狀態進行攝錄。
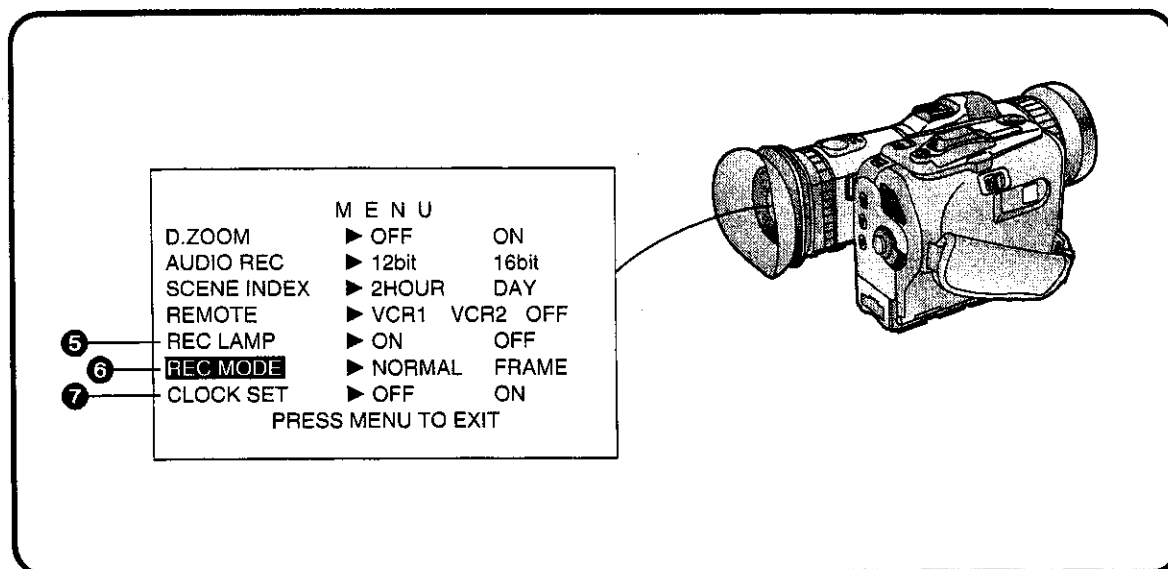
16畢特：以16畢特/48kHz狀態進行攝錄。

③ SCENE INDEX（場景索引）

用於進行索引尋影（→120）

◆ 2 HOUR（小時）：當2小時以後置新開始攝影時，將錄製索引信號。

DAY（天）：上次攝影後改天重新開始攝影時，將錄製索引信號。

④ REMOTE（遙控）

當使用兩台攝錄影機時，用於選擇不同的遙控器狀態。（→108）

◆ VCR1：遙控器狀態1。

VCR2：遙控器狀態2。

OFF：不能用遙控器進行攝錄影機的操作。

```
                    M E N U
    D.ZOOM        ► OFF        ON
    AUDIO REC     ► 12bit      16bit
    SCENE INDEX   ► 2HOUR      DAY
    REMOTE        ► VCR1  VCR2  OFF
❺── REC LAMP      ► ON         OFF
  ❻─ REC MODE     ► NORMAL     FRAME
❼── CLOCK SET     ► OFF        ON
            PRESS MENU TO EXIT
```

ENGLISH

❺ REC LAMP

◆ ON: Tally Lamp on front of Movie Camera
          lights during recording.
  OFF: Tally Lamp does not light.

❻ REC MODE

◆ NORMAL: Pictures are recorded in the normal way
          (2 fields for 1 frame).
          Select this mode for all normal recording.
  FRAME: Pictures are recorded as frames. This
          gives them increased vertical resolution,
          but the movements become jerky.
          Use this mode for recording still pictures
          which you want to print or import into a
          computer, etc.

❼ CLOCK SET

◆ OFF: The Date/Time Set Menu does not
          appear in the Finder.
  ON: The Date/Time Set Menu appears in the
          Finder. (If you want to set the date and
          time, select this setting.) (➜ 60)

中 文

❺ REC LAMP（攝影燈）

◆ ON：   攝影中，攝錄影機前面的信號燈會亮起。
  OFF： 信號燈不亮。

❻ REC MODE（攝影狀態）

◆ NORMAL： 以普通方式進行畫面攝影（1個畫面2幀）。
           對於所有的普通攝影，請選擇該狀態。
  FRAME： 畫面被攝製為一幀。這樣，便可提高垂直解
           像度，但是移動將不平穩。
           使用該狀態，可攝製您打算印刷或輸入電腦
           等之中的靜止畫面。

❼ CLOCK SET（時鐘設定）

◆ OFF： 尋像器中不會出現時鐘設定屏幕。
  ON ： 時鐘設定屏幕出現在尋像器中（如果您打算設定日期
        和時間時，請選擇該方式）。(➜60)
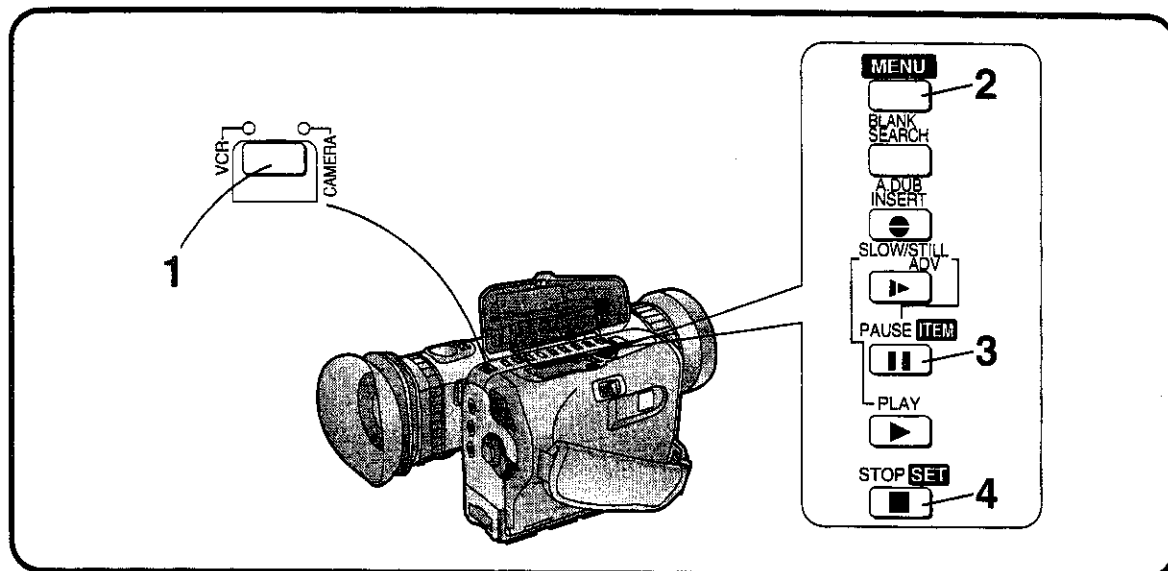
2) Using the VCR Mode Menu

1 Press the [VCR/CAMERA] Button so that the [VCR] Lamp lights.

2 Press the [MENU] Button.
 ●The VCR Mode Menu appears in the Finder.

3 Press the [ITEM] Button repeatedly until the desired item is highlighted.

4 Press the [SET] Button.
 ●The [▶] Mark indicates the selected mode.

■ **To End the Menu Function:**
Press the [MENU] Button again.

2)怎樣使用VCR狀態條目

1 按 [VCR/CAMERA] 鈕，使 [VCR] 燈亮起。

2 按 [MENU] 鈕。
 ●VCR狀態條目出現於尋像器中。

3 重復按 [ITEM] 鈕，直到需要的項目亮起。

4 按 [SET] 鈕。
 ●[▶] 標誌表示選擇的狀態。

■ 結束條目功能時：
再次按 [MENU] 鈕。

```
                    M E N U
SEARCH          ▶ SCENE    PHOTO
AUDIO OUT       ▶ ST1    ST2    MIX
AUDIO SEL.      ▶ STEREO    L    R
REMOTE          ▶ VCR1   VCR2   OFF
CLOCK SET       ▶ OFF        ON


        PRESS MENU TO EXIT
```

■ **VCR Mode Menu**

The ◆ mark indicates the initial setting.

❶ SEARCH

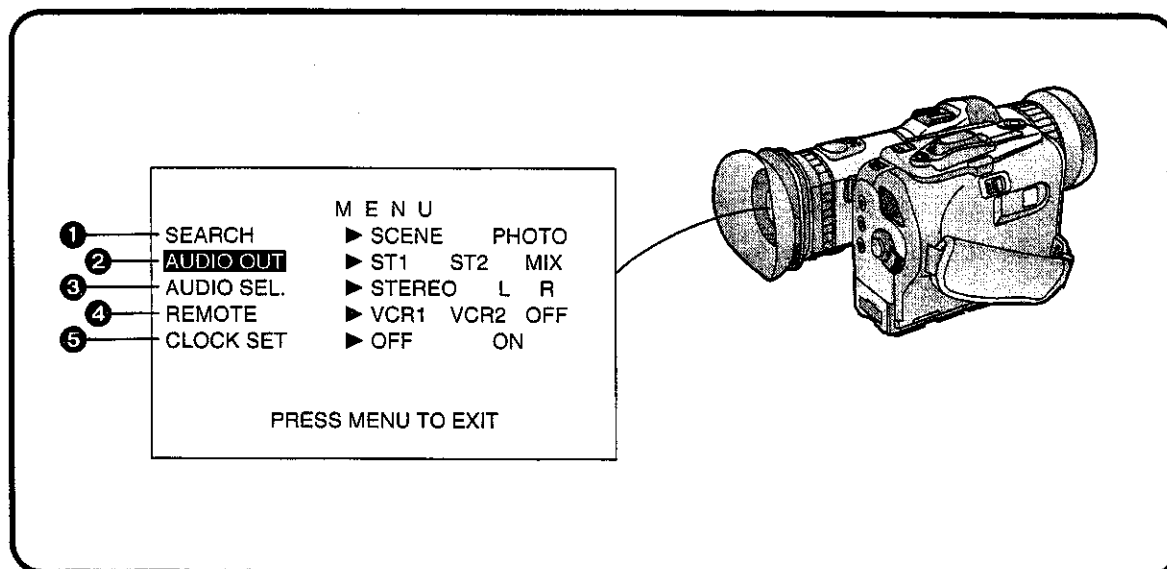For selecting the operation mode of the Scene Index Search or Photoshot Search Function (➜ 120, 122)

◆ SCENE: To search for the beginning of scenes marked with index signal.

SCENE: To search for still pictures recorded in the Photoshot Mode.

PHOTO: To search for still pictures recorded in the Photoshot Mode.

❷ AUDIO OUT

This selection is only possible if the recording was performed with [12 bit] selected for [AUDIO REC] in the Camera Mode Menu.

◆ ST1: Original sound (sound before performing audio dubbing) is played back.

ST2: Sound added with Audio Dubbing is played back.

MIX: Original sound and sound added with Audio Dubbing are played back mixed together.

([ST] means STEREO.)

❸ AUDIO SEL.

◆ STEREO: Sound is played back in stereo.

L: Left channel sound alone is played back from both L and R terminals.

R: Right channel sound alone is played back from both L and R terminals.

☞ However, when [MIX] is selected for [AUDIO OUT] (❷ above), any selection made for [AUDIO SEL.] has no effect.

❹ REMOTE

Settings and operation are same as in Camera Mode Menu. (➜ 48)

❺ CLOCK SET

Settings and operation are same as in Camera Mode Menu. (➜ 50)

♥ The selected settings are maintained even when you turn the Movie Camera off.

♥ You can also display the menu on a connected TV. (➜ 36)

■ 在狀態條目下，您可進行下列放影設定：

◆標誌表示初期設定。

❶ SEARCH(尋影)

用於選擇場景索引尋影或拍照索引尋影功能的操作狀態。(➜120, 122)

◆ SCENE(場景)：可尋影到標有索引信號的場景之前。

PHOTO(拍照)：可尋影照相狀態下攝製的靜止畫面。

❷ AUDIO OUT(音頻輸出)

只有在攝錄影機狀態條目中的 [AUDIO REC] 選擇了 [12 畢特] 下進行攝影時，才能進行該選擇。

◆ ST1：播放原聲(進行音頻複製之前的聲音)。

ST2：播放增加了音頻複製後的聲音。

MIX：混合播放原聲和增加了音頻複製後的聲音。([ST]意思爲立體聲。)

❸ AUDIO SEL.(音頻選擇)

◆ STEREO：以立體聲播放聲音。

L：　　僅播放來自左右端子的左聲道的聲音。

R：　　僅播放來自左右端子的右聲道的聲音。

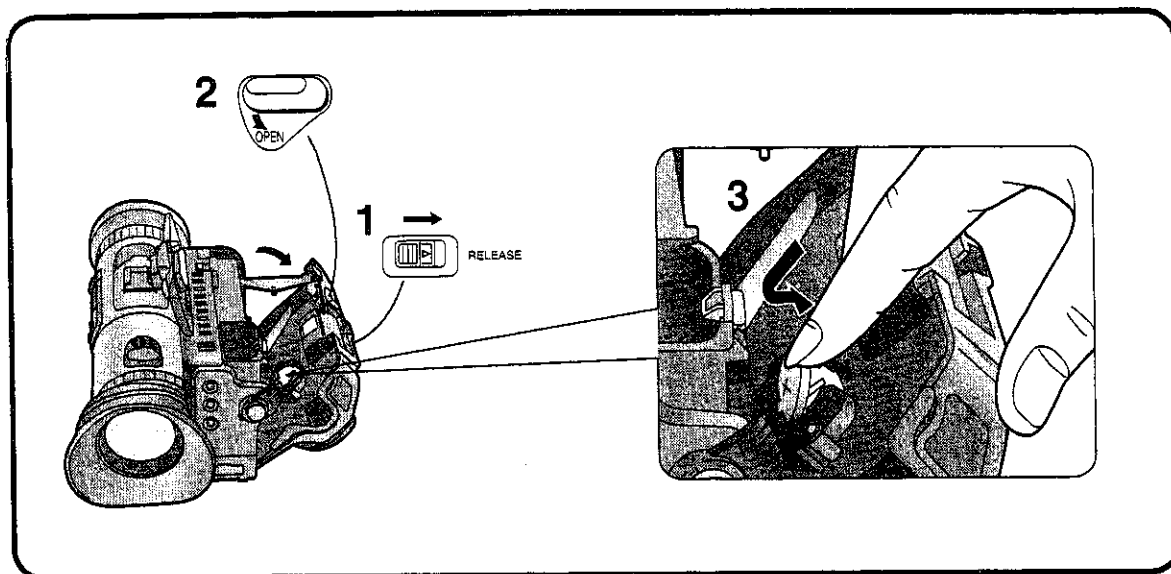☞ 然而，當 [MIX] 被設置在 [AUDIO OUT](上述❷)時，對[AUDIO SEL.]所作的任何選擇都無效。

❹ REMOTE(遙控)

設定和操作與攝錄影機狀態條目相同。(➜48)

❺ CLOCK SET(時鐘設定)

設定和操作與攝錄影機狀態條目相同。(➜50)

♥ 即使關閉了攝錄影機，選擇的設定也會得到保存。

♥ 您還可在連接的電視機上顯示條目。(➜36)

Setting the Date and Time

1) Inserting the Button-type Battery into the Movie Camera

This Battery is needed for the operation of the Movie Camera's internal clock.

☞ The Battery could explode if inserted incorrectly. Be sure to observe the following points:

☞ Do not insert it with the poles (+/−) reversed.

☞ Keep it out of reach of children to prevent it from being swallowed by a child.

1 Slide the [RELEASE] Lever forward.

2 Turn the [OPEN] Lever outward.

3 Insert the supplied CR2032 battery with its (+) side facing upward, as shown above.
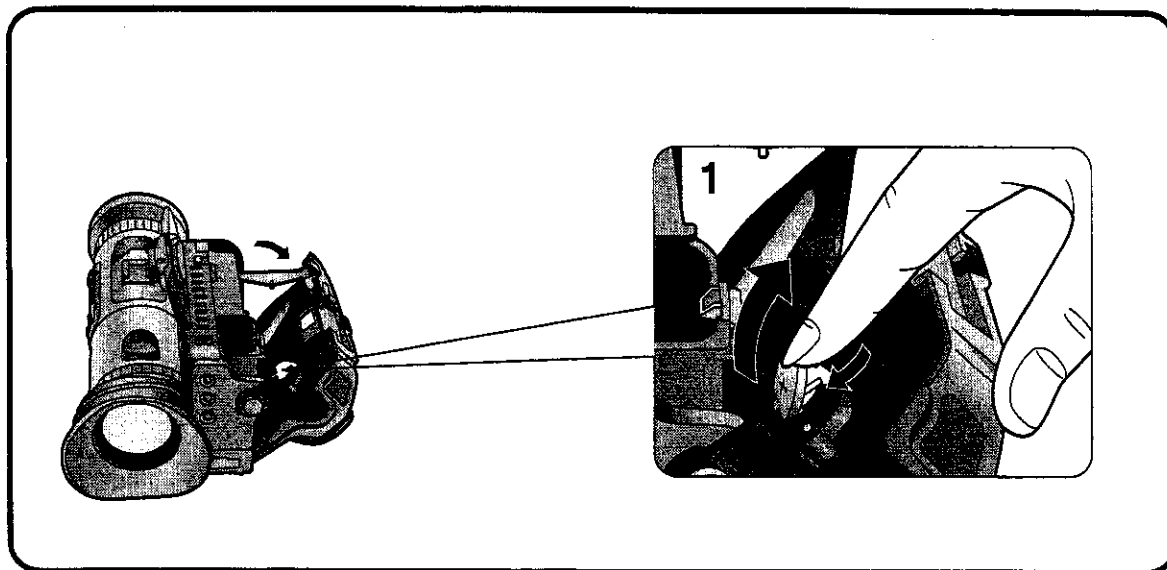
怎樣設定日期和時間

1）怎樣將鈕扣式電池插入攝錄影機

攝錄影機的內部時鐘需要使用這種電池。

☞ 假如插入不當，電池可能會破裂，所以須遵守下列要點：

☞ 插入時，極性（+／−）不能弄顛倒。

☞ 請將其保存在孩子觸摸不到的地方，以免被孩子吞入口中。

1 向前滑動［RELEASE］柄。

2 朝外撥［OPEN］柄。

3 如上圖所示，將（+）極朝上，插入附帶的CR2032型電池。

■ Replacing the Button-Type Battery

▼ The life of the battery is about 1 year. When the battery becomes exhausted, the [⊟] indication flashes in the Finder.

Replace with a new CR2032 battery.

1 Take out the exhausted battery after steps (1) and (2) on page 56. (Push it down and tilt it toward the Movie Camera body, then lift it out.)

2 Insert a new CR2032 battery as explained in step (3) on page 56.

☞ Disposal of the exhausted battery:
Do not dispose of the battery with your household waste; consult with your dealer about correct disposal.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

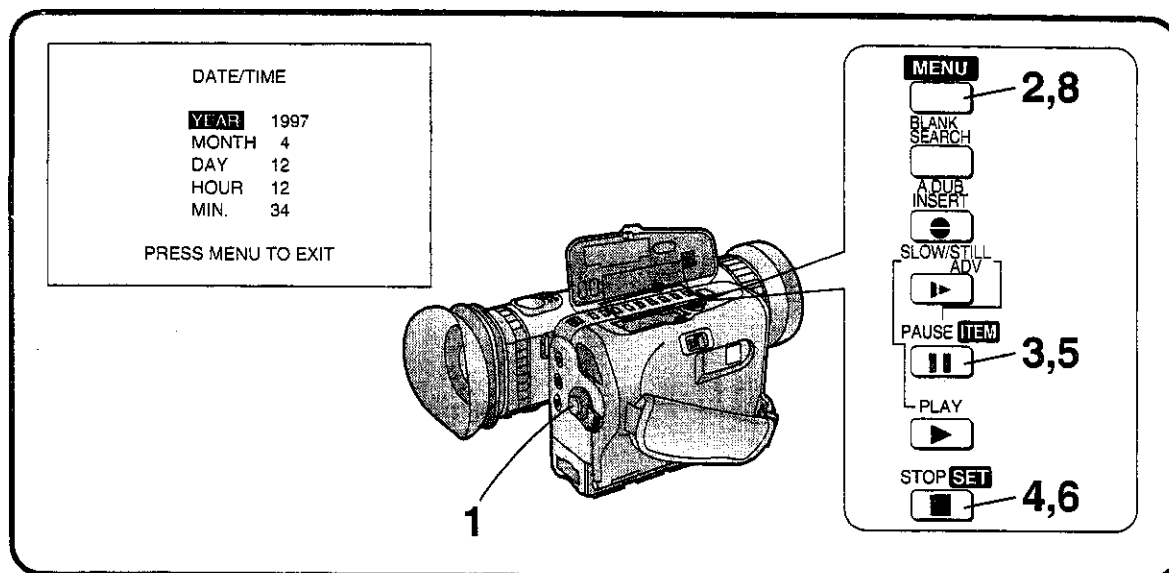## ■ 怎樣更換鈕扣式電池

▼電池壽命約為一年。當電池快耗盡時，尋像器中的 [⊟] 指示會閃爍。

換上新的CR2032電池。

1 在第56頁的步驟(1)和(2)之後，取出耗盡的電池（一邊下按，一邊朝攝錄影機機體方向傾斜，然後將其取出）。

2 在第56頁的步驟(3)所示，插入新的CR2032型電池。

☞ 耗盡電池的處理：
勿將電池與家庭垃圾一塊處理;有關正確的處理方法, 請詢問銷售商。

注意事項:

如果電池更換不當，將有爆炸危險。只能用設備製造廠家推薦的相同或同等品進行更換。請遵照製造廠家的說明丟棄電池。

DATE/TIME

YEAR 1997
MONTH 4
DAY 12
HOUR 12
MIN. 34

PRESS MENU TO EXIT

MENU **2,8**

BLANK
SEARCH

A.DUB
INSERT

SLOW/STILL
ADV

PAUSE ITEM **3,5**

PLAY

STOP SET **4,6**

1

2) Setting the Date and Time

Use the Menu Function. (→ 46)
Use either the Camera Mode Menu or VCR Mode Menu
to set the date and time.

1 **Supply power to the Movie Camera.**
(Either with the AC Adaptor or the Battery.)

2 **Press the [MENU] Button.**
●The Mode Menu appears in the Finder.

3 **Press the [ITEM] Button until [CLOCK SET]
is highlighted.**

4 **Press the [SET] Button to move the [▶]
mark to [ON].**
●The Date/Time Set Menu appears in the Finder.

5 **Press the [ITEM] Button repeatedly until
[YEAR] is highlighted.**

6 **Press the [SET] Button repeatedly to set
the present year.**

7 **Also set the [MONTH], [DAY], [HOUR],
[MIN] as explained in steps (5) and (6).**

8 **After you have set the date and time and
confirmed that it is correct, press the
[MENU] Button.**
●The operation of the clock starts.

中 文

2）怎樣設定日期和時間
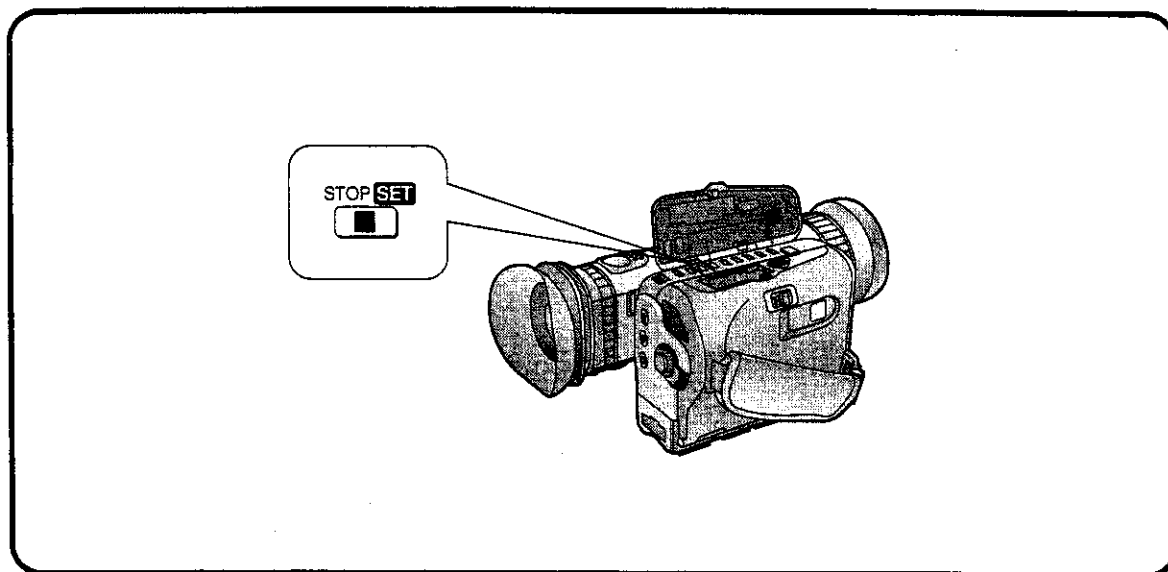
條目功能的使用(→46)。
用攝錄影機狀態條目或VCR狀態條目，可設定日期和時間。本
頁上所解釋的，爲使用攝錄影機狀態條目時的設定操作。

1 接通攝錄影機的電源。
（用交流轉接器或電池。）

2 按 [MENU] 鈕。
●攝錄影機狀態條目出現於尋像器中。

3 按[ITEM]鈕，直到 [CLOCK SET] 亮起。

4 按 [SET] 鈕，使 [▶] 游標移到 [ON]。
●日期/時間設定條目會出現在尋像器。

5 重復按 [ITEM] 鈕，直到 [YEAR] 亮起。

6 重復按 [SET] 鈕，設定現在的年數。

7 也請依步驟(5)和(6)，設定好月 [MONTH]、日
[DAY]、小時 [HOUR] 和分鐘 [MIN]。

8 設定並確認了日期和時間之後，請按 [MENU]
鈕。
●時鐘即開始運行。

The figures in the Date/Time Indication change in the following order:
If you make a mistake in setting, keep pressing the [SET] Button to rapidly change the numbers. When you get near the correct figure press repeatedly to select the precise number.

Year: **1990**→1991→ . . . . . . →2089→**1990**→...
Month: **1**→**2**→ . . . . →12→1→...
Day: **1**→**2**→ . . . . →31→1→...
Hour: **0**→**1**→ . . . . →23→**0**→...
Minute: **00**→**01**→ . . . . →59→**00**→...

日期和時間指示中的數字將以下列順序變化：
如果設定時出錯，請持續按住［SET］鈕，使數字快速改變。
當接近正確的數字時，請置復按鈕，選擇精確的數字。

年：　1990→1991→ ·················· →2089→1990→
月：　1→2→ ······················ →12→1→
日：　1→2→ ······················ →31→1→
小時：0→1→ ·························→23→0→
分鐘：00→01→ ·······················→59→00→
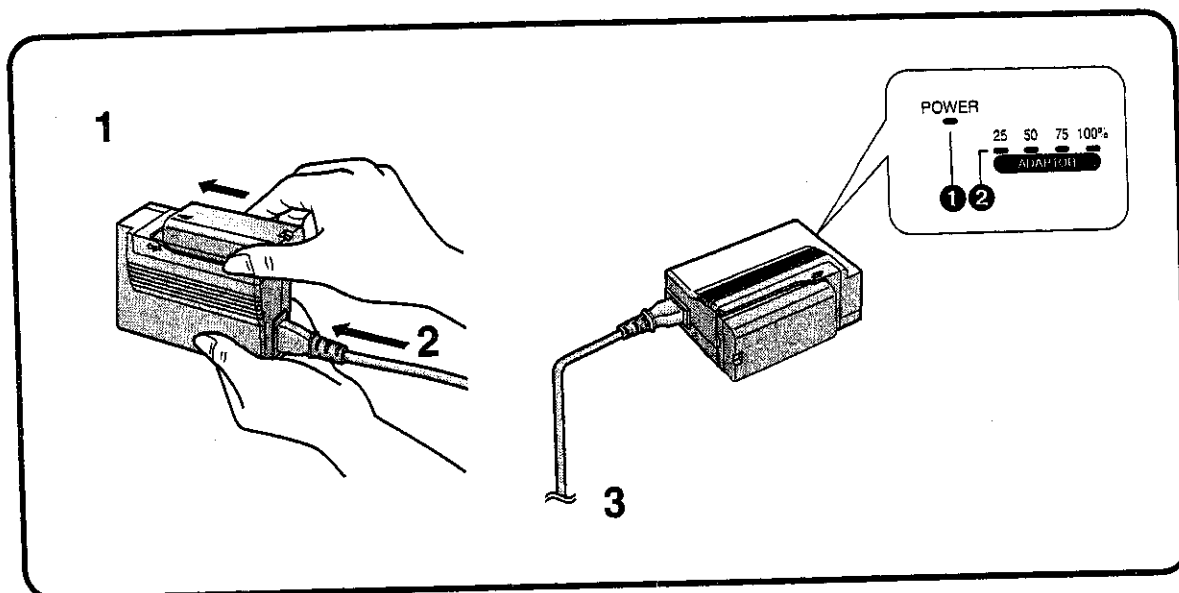
Charging the Battery

♥ The Battery was only minimally charged before shipping. Therefore, fully charge it before you use it for the first time.

☞ Charge the Battery at an ambient temperature between 10°C and 30°C. If the ambient temperature is too low or too high, it may take longer to charge the Battery. (In this case, the [CHARGE] Lamps flash slowly.)
Or charging may not be possible at all. (The [CHARGE] Lamps flash alternately by twos.) In this case, charging starts when the temperature returns to the above temperature range.

☞ During charging, the [CHARGE] Lamps flash and then remain lit one after another (from [25] to [100%]) to indicate the approximate charging capacity.

1 Slide the Battery horizontally onto the AC Adaptor as shown above and slide until it stops.

2 Securely connect one end of the supplied AC Mains Cable to the [AC IN] Socket on the AC Adaptor.

3 Connect the other end to an AC mains socket.
●The [POWER] Lamp ❶ lights and then the [CHARGE] Lamps ❷ start to flash in succession. When all four [CHARGE] Lamps have stopped flashing and remain lit, charging is finished.

☞ During charging and use in the Movie Camera, the Battery may become warm. This is normal. However, if it becomes so hot that you cannot touch it by hand, immediately stop charging or using it and consult qualified service personnel.

怎樣給電池充電

♥ 電池出廠時，充電極少。所以，在第一次使用之前，必須將電池充足電。

☞ 請在10℃～30℃的房間溫度下進行電池充電。如果環境溫度太低或太高，可能會延長充電時間(在此情況下，[CHARGE]燈會慢慢閃爍)。
或者完全不能進行充電([CHARGE]燈兩下、兩下地輪流閃爍)。在此情況下，只有當溫度恢復上述溫度範圍內時，才能開始充電。

☞ 充電期間，[CHARGE]燈先閃爍，然後一個接一個亮起(從[25]～[100%])，表示出大致的充電量。

1 如上圖所示，將電池水平滑入交流轉接器，直至其停止爲止。

2 必須將附帶的交流電源線中的一端，連接至交流[AC IN]插座。

3 連接至交流電源插座的其它端子。
●[POWER]燈❶亮起，接著[CHARGE]燈❷將開始閃爍。當所有的4個[CHARGE]燈都停止閃爍並保持亮起時，說明充電已經結束。

☞ 在充電和攝錄影機使用中，電池可能會變熱。這是正常現象。
然而，當其熱得燙手時，請立即停止充電或使用，並咨詢專業維修人員。

中 文
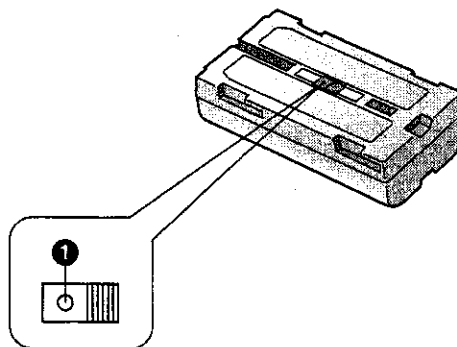
■ Charging Time and Maximum Time for Continuous Recording in the Manual Recording Mode

Battery Pack No.	Charging Time	Max. Continuous Recording Time
Supplied	Approx. 80 min.	Approx. 60 min.
VW-VBD1E	Approx. 80 min.	Approx. 60 min.
VW-VBD2E	Approx. 160 min.	Approx. 120 min.

♥ Max. Continuous Recording Time means the duration of continuous recording performed at an ambient temperature of 20°C and 60% humidity.
In actual recording, however, the use of the zoom and other functions increases the power consumption, and higher or lower temperature reduces the Battery's ability to generate electricity. Therefore, the actual recording time per Battery may be drastically shorter (approx. 30%–50%) than listed above.

♥ When you go recording outside, it is recommended to take along Batteries sufficient for about three times the intended recording time.

■ Using the Charge Confirmation Marker

You can use this marker to easily distinguish between charged and discharged Batteries.
For example, slide the knob so that the red dot ❶ is visible after the charging is completed.

■ 手動攝影狀態下的充電時間與最長連續拍攝時間

電池型號	充電時間	最長連續攝影時間
附帶的	約80分鐘	約60分鐘
VW-VBD1E	約80分鐘	約60分鐘
VW-VBD2E	約160分鐘	約120分鐘

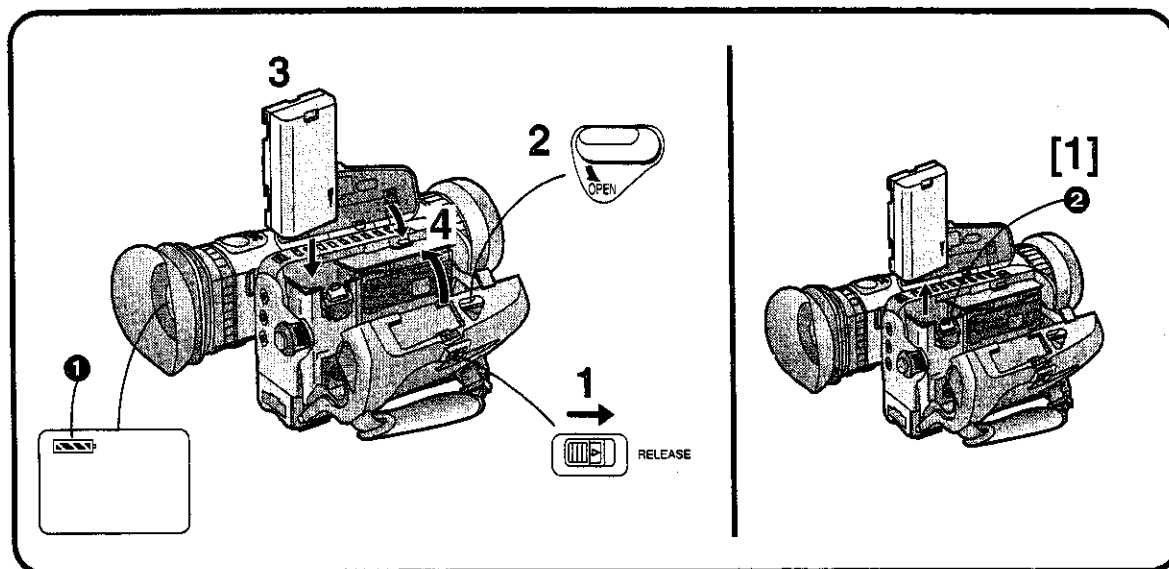♥ 最長連續拍攝時間意思爲在溫度20℃和濕度60%的環境下，可以連續進行拍攝的時間。
然而，在實際攝影中，變焦和其它功能的使用會增加耗電量，偏高和偏低的溫度也會縮短電池的產電能力。所以，每個電池的實際拍攝時間可能會大大短於上表所列（約30%～50%）。

♥ 當您在室外攝影時，建議您備足比計劃攝影時間約長 3 倍的電池。

■ 怎樣使用充電確認標記

利用此標記，易於區別充好電或已放電的電池。
例如，充電完全結束後，滑動該鈕使紅點 ❶ 可見。

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■ Inserting the Charged Battery

1 Slide the [RELEASE] Lever forward.

2 Turn the [OPEN] Lever outward.

3 Insert the Battery with the [▼] Mark pointing downward and push it down until it locks with a click.

4 Close first the Cassette Compartment and then the Control Panel Cover.

♥ The remaining battery power can be confirmed with the Remaining Battery Power Indication ❶ displayed in the Finder.
When the Battery is exhausted, this indication flashes and the Movie Camera automatically turns off.

☞ After inserting the Battery, the Remaining Battery Power Indication briefly indicates a fully charged Battery regardless of the actual charging condition. After a few seconds, it indicates the actual remaining battery power.

■ Removing the Battery

[1] After the steps (1) and (2) above, pull the Battery Eject Lever ❷ outward.
● The Battery pops up. Take it out carefully so that it does not drop.

☞ When you have finished using the Movie Camera, remove the Battery. If you leave the Battery in the Movie Camera, a small amount of electricity is consumed even if the [POWER] Switch is off, and this reduces the Battery's charge. If you leave the Battery in the Movie Camera for a very long time, it may become excessively discharged. This would make further use of the Battery impossible, even if it is charged normally.

■ 怎樣裝上充好電的電池

1 向前滑動 [RELEASE] 柄。

2 外撥 [OPEN] 柄。

3 插入電池時，要使 [▼] 標誌朝下，將其下按，直到其咔嗒一聲到位。

4 首先關閉磁帶艙，然後關閉控制板蓋。

♥ 用尋像器中顯示的剩餘電池電源指示 ❶，可以確認電池的剩餘電量。
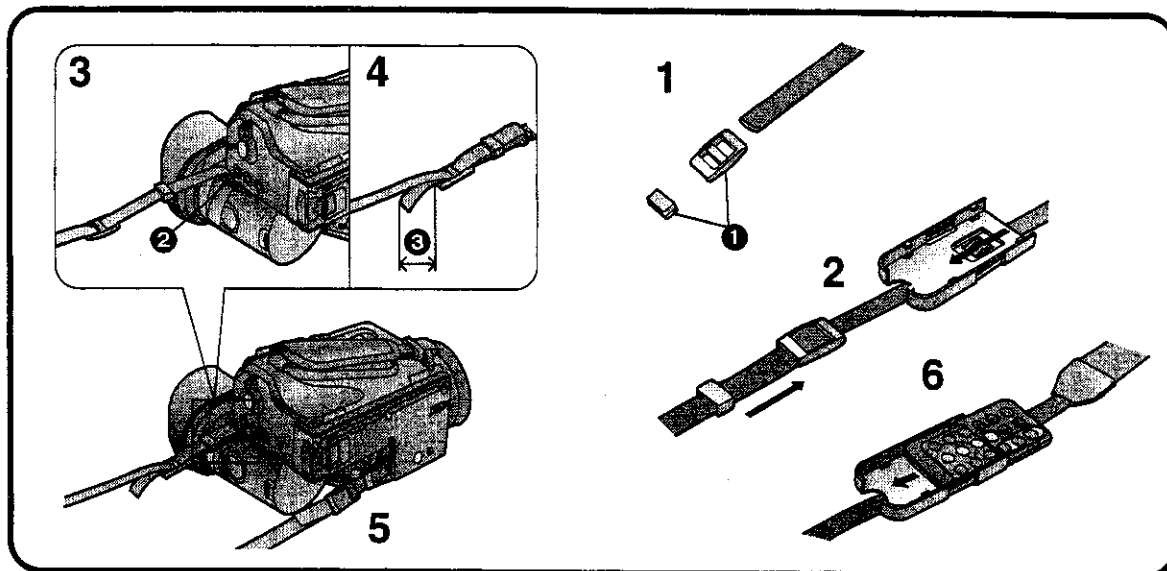當電池耗盡時，該指示將閃爍，且攝錄影機也會自動關機。

☞ 插入電池後，不管實際充電情況如何，剩餘電池電力指示會短暫地表示電池充足電的狀況。幾秒鐘後，它將表示實際的電池剩餘電量。

■ 取下電池時

[1] 在上述步驟(1)和(2)之後，向外拉電池排出柄 ❷。
● 電池會彈出。請小心拿放，勿將其摔落。

☞ 在您結束使用攝錄影機後，請取出電池。如果將電池留在攝錄影機內，即使關閉了 [POWER] 開關，也仍將減少電池電量。如果將電池留在攝錄影機內時間太長，則可能使其過於放電。這樣，即便進行了標準充電，電池也可能再也無法使用了。

Attaching the Shoulder Strap and Remote Controller Holder

The Shoulder Strap is for protecting the Movie Camera from dropping. Attach the Shoulder Strap before you go recording outside. You can also attach the Remote Controller Holder to the Shoulder Strap so the Remote Controller is always handy.

1 Remove the Shoulder Strap Length Adjusters ❶ as shown above.

2 Pull one end of the Shoulder Strap through the two slots the Remote Controller Holder and re-insert the Shoulder Strap Length Adjusters.
   ☞ Attach the Remote Controller Holder so that it faces outward when you hang the Movie Camera over your shoulder.

3 Pull the same end of the Shoulder Strap through the Shoulder Strap Holder ❷.

4 Securely attach this end of the Shoulder Strap ❸ (More than 2 cm).

5 Attach the other end of the Shoulder Strap to the Movie Camera in the same way as above.

6 Insert the Remote Controller securely into the Remote Controller Holder.

☞ After attaching the Shoulder Strap, pull on it to check that it is firmly attached.

怎樣安裝肩用背帶和遙控器支座

肩用背帶可用於防止攝錄影機摔落。在外出攝影之前，請裝上肩用背帶。您也可將遙控器支座裝在肩用背帶上，以便隨手使用遙控器。

1 如上圖所示，拆下肩用背帶長度調節器❶。

2 拉動肩用背帶的頭，使其穿過遙控器支座，然後重新插入肩用背帶調節器。
   ☞ 當您將攝錄影機背在肩膀上時，請將遙控器支座朝外安裝。

3 拉動肩用背帶的同一頭，穿過肩用背帶環❷。

4 牢固地裝緊肩用背帶的這一端（❸（長於2cm））。

5 用上述同樣的方法，將肩用背帶的另一端安裝在攝錄影機上。

6 將遙控器牢靠地插入支座內。

☞ 裝好肩用背帶後，請拉一拉，檢查其是否牢靠固緊。

12:34:00
12. 4.1997

12. 4.1997

1 DATE/TIME
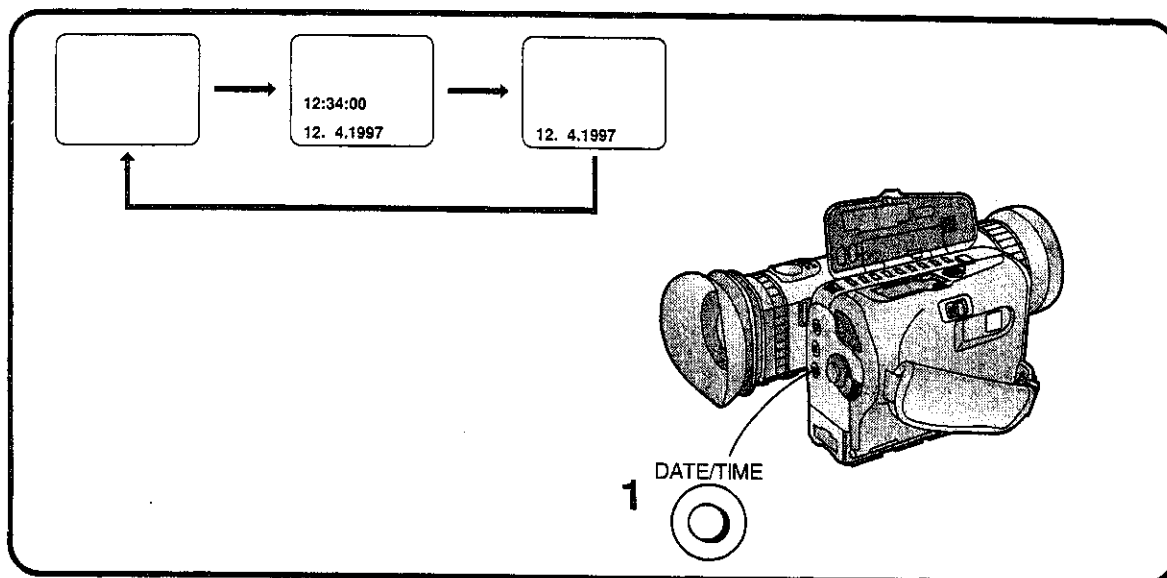
Advanced Recording Techniques

Date and Time

■ **Inserting and Deleting the Date and Time in the picture**

This Movie Camera automatically records the date and time as part of the sub code (➔ 142) separately from the video and audio signals.

During playback, you can make the date and time appear and disappear in the picture by pressing the [DATE/TIME] Button. You can also make them appear and disappear during recording, for example to time the length of the scene. Or during recording or in the Recording Pause Mode to confirm that date and time are set correctly ("Setting the Date and Time" ➔ 56).

When no Date/Time Indication is displayed on the TV screen or in the Finder...

1 **Press the [DATE/TIME] Button to select the desired indication.**

1) Pressing once: Date and time are indicated.
   For example: 12:34:00
   　　　　　　　12.4.1997
2) Pressing twice: Only date is indicated.
   For example: 12.4.1997
3) Pressing three times: No indication

♥ No Date and Time Indication setting is selected when the Movie Camera is shipped.
♥ The Date and Time Indication changes circularly. Look in the Finder and press the [DATE/TIME] Button repeatedly until the desired indication appears.

先進的攝影技術

日期和時間

■ **怎樣插入和刪除畫面中的日期和時間**

該攝錄影機會自動將日期和時間作為影像和音頻信號之外的副編碼(➔142)的一部分，來進行攝製。在放影中，您可以按 [DATE/TIME] 鈕，使日期和時間顯示在畫面出現或消失。您也可在攝影中使其出現或消失，例如：記錄場景的長度。在攝影或攝影暫停狀態下，請確認日期和時間設定正確("怎樣設定日期和時間" ➔56)。
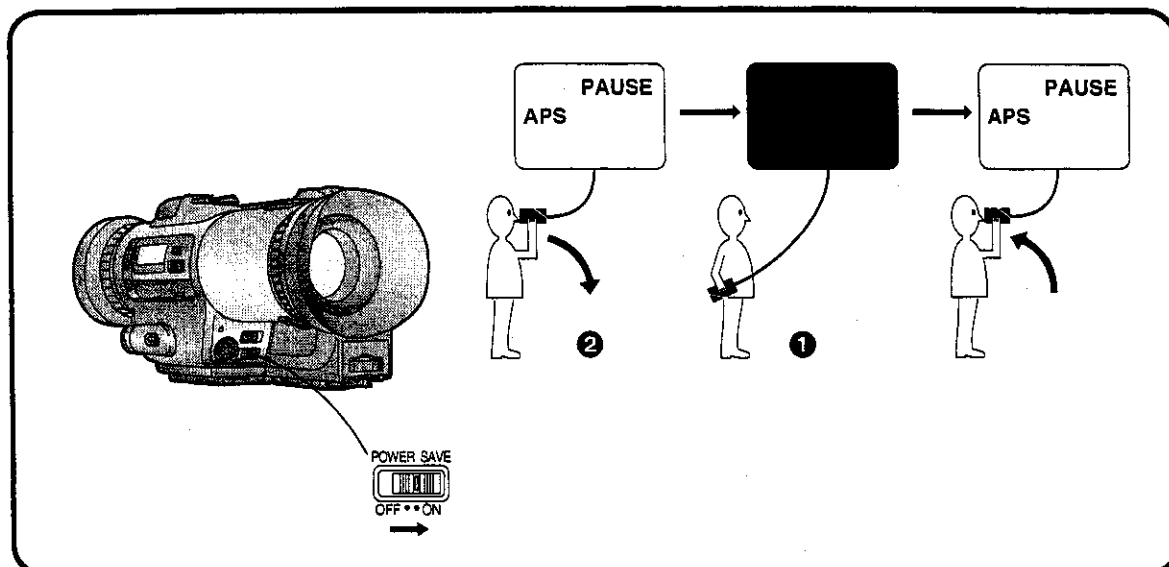
當尋像器中未顯示日期/時間指示時……

1 按 [DATE/TIME] 鈕，選擇需要的指示。

1) 按 1 次：顯示出日期和時間。
   例如：12:34:00
   　　　　12.4.1997
2) 按 2 次：僅顯示出日期。
   例如：12.4.1997
3) 按 3 次：無顯示

♥ 攝錄影機出廠時，選擇了無日期和時間指示設定。
♥ 日期和時間指示可輪流改變。觀看尋像器，重復按 [DATE/TIME] 鈕，直到出現需要的指示。

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Using the Power Save Function

The Power Save Function prevents wasting battery power.

☞ This function activates only when the Movie Camera is in the Recording Pause Mode.

When the [POWER SAVE] Switch is set to [ON], the [APS] Indication appears in the Finder.
([APS] means Auto Power Save.)

1 When you tilt the Movie Camera downwards by more than about 70° ❶ from the normal horizontal recording position ❷ for more than a few seconds, the Finder automatically turns off.

2 When you return the Movie Camera to an approximately horizontal position, the Finder automatically turns on again, and you can record again.

☞ After the Finder has turned on again, the Auto White Balance Adjustment may not be precise for the first few seconds.

■ **When you don't want to use the Power Save Function:**
Set the [POWER SAVE] Switch to [OFF].

怎樣使用節電功能

節電功能可以防止電池電源的浪費。
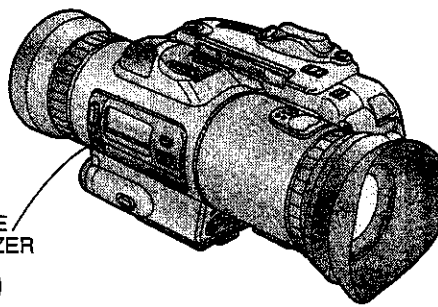
☞ 只有當攝錄影機處於攝影暫停狀態時，該功能才會啓動。

當[POWER SAVE]開關被設在[ON]時，[APS]指示出現於尋像器中。([APS]意思爲自動節電。)

1 如果您將攝錄影機從普通的水平拍攝位置❷向下傾斜70°以上❶，且超過幾秒鐘時，尋像器會自動關閉。

2 當您將攝錄影機恢復到大約水平的位置時，攝錄影機會自動重新打開，使您能夠再次攝影。

☞ 在尋像器再次啓動後，自動白色平衡調節在開始的幾秒鐘可能不精確。

■ 當您不想使用節電功能時：
請將 [POWER SAVE] 開關設置在 [OFF]。

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1 IMAGE/ STABILIZER

Using the Image Stabilizer

This function compensates for camera-shake during hand-held recording and ensures stable pictures. It is especially practical for the following recording situations:

♥ When you zoom in on a distant subject.
♥ When you record while walking.
♥ When you record from inside a moving car.

1 Press the [IMAGE STABILIZER] Button.
●The [🔲] Indication appears in the Finder.

☞ When you use this function, the shutter speed is automatically adjusted between 1/125 s and 1/50 s depending on the brightness of the scene.

■ To Cancel the Image Stabilizer Function:
Press the [IMAGE STABILIZER] Button again to make the [🔲] Indication disappear.

☞ The shutter speed is automatically reset to 1/50 s unless you have manually selected a different shutter speed.

■ In the following recording conditions, the picture stabilizing effect may not be sufficient:
☞ A subject with horizontal or vertical stripes
☞ A flat subject
☞ A dark subject
☞ A subject under many fluorescent lamps
☞ A fast-moving subject
☞ A subject with a flat background

■ When Using the Image Stabilizer Function, the Picture Changes as Follows:
☞ The subject becomes slightly enlarged.
☞ The picture quality deteriorates slightly.
☞ Under fluorescent lamps, the picture brightness may fluctuate and the colours may be unnatural.

怎樣使用圖像穩定器

在手拿攝影中，該功能可抑制攝錄影機的晃動，以確保穩定的畫面。尤其在下列情況下，該功能特別見效：
♥當您拉近遠處的目標物時。
♥當您在走路中攝影時。
♥當您開動的汽車內攝影時。

1 按 [IMAGE STABILIZER] 鈕。
●[🔲] 指示出現於尋像器中。

☞ 在您使用該功能中，本機將根據場景亮度，在1/50秒～1/125秒之間自動進行快門速度調節。
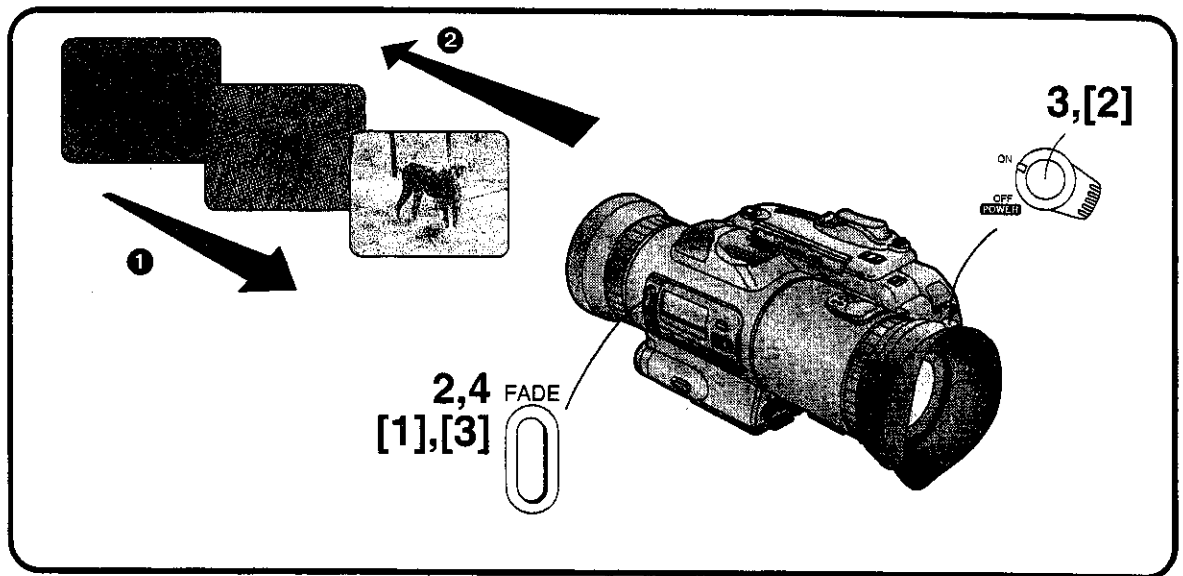
■ 取消圖像穩定器功能時：
再次按 [IMAGE STABILIZER] 鈕，使 [🔲] 指示消失。

☞ 快門速度將被自動重新設置為1/50秒（除非您手動選擇了不同的快門速度）。

■ 在下列攝影狀況下，畫面穩定效果可能不明顯：
☞ 具有水平和垂直條紋的目標物
☞ 平淡的目標物
☞ 暗弱的目標物
☞ 在大量熒光燈下的目標物
☞ 快速移動的目標物
☞ 背景平淡的目標物

■ 使用圖像穩定功能中，畫面將如下改變：
☞ 目標物將稍微變大。
☞ 畫質稍微降低。
☞ 在熒光燈下，畫面亮度可能會波動，色彩也可能會不自然。

3,[2]

2,4 FADE
[1],[3]

Fading In/Out

Fading-in lets you make the picture appear gradually together with the sound at the beginning of a recording ❶, and fading-out lets you make them disappear gradually at the end ❷. By fading out a scene and fading in the following one, you can produce smooth scene-to-scene transitions.

■ Fading In ❶

1 With the Movie Camera in the Recording Pause Mode, aim it at the scene that you want to start recording.

2 Press the [FADE] Button and keep it pressed.

3 When the picture in the Finder has completely disappeared, press the Start/Stop Button to start recording.

4 Wait 2–3 seconds and then release the [FADE] Button.

■ Fading Out ❷

[1] During recording, press the [FADE] Button at the point where you want to fade, and keep it pressed.

[2] After the picture in the Finder has completely disappeared, press the Start/Stop Button to stop recording.

[3] Release the [FADE] Button.

怎樣淡入/淡出

淡入功能可讓您使畫面與聲音逐漸出現在攝影開頭❶, 而淡出則可讓您使其逐漸消失在結尾處❷。利用淡出某個場景, 然後淡入下一個場景,便可進行場景和場景之間的圓滑相接。

■ 怎樣淡入❶

1 使攝錄影機處於攝影暫停狀態, 將其對好您打算拍攝的場景。

2 按[FADE]鈕, 並持續按住。

3 待尋像器中的畫面完全消失後,再按Start/Stop鈕, 開始攝影。

4 等2～3秒鐘, 然後鬆開[FADE]鈕。

■ 怎樣淡出❷
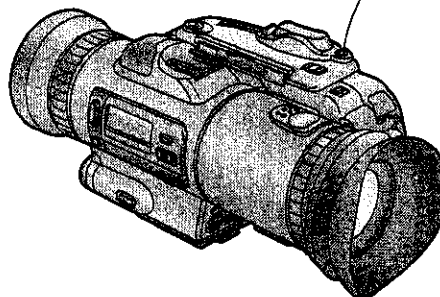
[1] 攝影中, 在打算淡出的位置按[FADE]鈕, 並持續按住。

[2] 待尋像器中的畫面完全消失後,再按Start/Stop鈕, 停止攝影。

[3] 鬆開[FADE]鈕。

PHOTO
001

MENU
D.ZOOM   ▶ OFF   ON
AUDIO REC   ▶ 12bit   16bit
SCENE INDEX   ▶ 2HOUR   DAY
REMOTE   ▶ VCR1   VCR2 OFF
REC LAMP   ▶ ON   OFF
REC MODE   ▶ NORMAL   FRAME
CLOCK SET   ▶ OFF   ON
PRESS MENU TO EXIT

PHOTO
SHOT

Recording a Still Picture (Photoshot)

You can record a still picture together with sound for approx. 7 seconds at the press of a button. This is convenient for example for recording sharp, stable still pictures of signboards, maps, etc. in your videos.

1 Select the desired recording mode in the Camera Mode Menu. (→ 46)

2 Press the [PHOTO SHOT] Button in the Recording Pause Mode.

♥ The [📷 001] Indication displayed in the Finder indicates the number of the still picture being recorded at present.

♥ When the subject is brightly lit, you can increase the shutter speed (→ 106) to minimise blurring of moving subjects.

♥ If you select [PHOTO] for [SEARCH] in the VCR Mode Menu (→ 52) for playback, you can use the Index Search Function (Photoshot Search Function) on the Remote Controller to directly access only the still pictures recorded in the Photoshot Mode.

■ **The Photoshot Number Indication is reset to [📷 001] by the following operations:**
  ●Fast-forwarding or rewinding the tape
  ●Ejecting the cassette
  ●Changing over to [VCR] Mode and back to [CAMERA] Mode

■ **Using the Movie Camera as a Still Camera:**
This Movie Camera can also be used as a still camera, for example, for pictures that you want to print or use in computer applications, etc. This mode lets you record still pictures with increased vertical resolution. One 60-minute cassette can hold approx. 500 still pictures.

怎樣拍攝靜止畫面 （拍照）

按該鈕，可以攝製約7秒鐘的靜止畫面和聲音。例如，該功能有助於將信號牌、地圖之類顯明、穩定的靜止畫面攝製在您的影像之中。

1 在攝錄影機狀態條目中，選擇需要的攝影狀態 （→46）。

2 在攝影暫停狀態下，按 [PHOTO SHOT] 鈕。
  ●在攝製靜止畫面時，尋像器中的圖像將保持靜止約7秒鐘。

♥尋像器中顯示的 [📷 001] 指示，說明目前正在攝製的靜止畫面的號碼。

♥當目標物很亮時，您可提高快門速度（→106），使移動目標物的模糊降至最低。

♥如果您在放影所用VCR狀態條目（→52）上的 [SEARCH] 中，選擇了 [PHOTO]，便可利用遙控器上的索引尋影功能（拍照尋影功能），直接進入拍照狀態下攝製的僅靜止畫面中。

■ **下列操作情況下，拍照號碼指示將被重新設置在 [📷 001]：**
  ●快進或倒轉磁帶時
  ●排除磁帶時
  ●切換至 [VCR] 狀態，並回到 [CAMERA] 狀態。

■ **怎樣將攝錄影機作爲電子靜物照相機來使用：**
該攝錄影機也可被作爲電子靜物照相機來使用，比如，用於拍攝您打算印刷或在計算機等中應用的畫面。該狀態可讓您攝製垂直解像度得到增強的靜止畫面。在60分鐘的磁帶上，可收納約500張靜止畫面。

❶
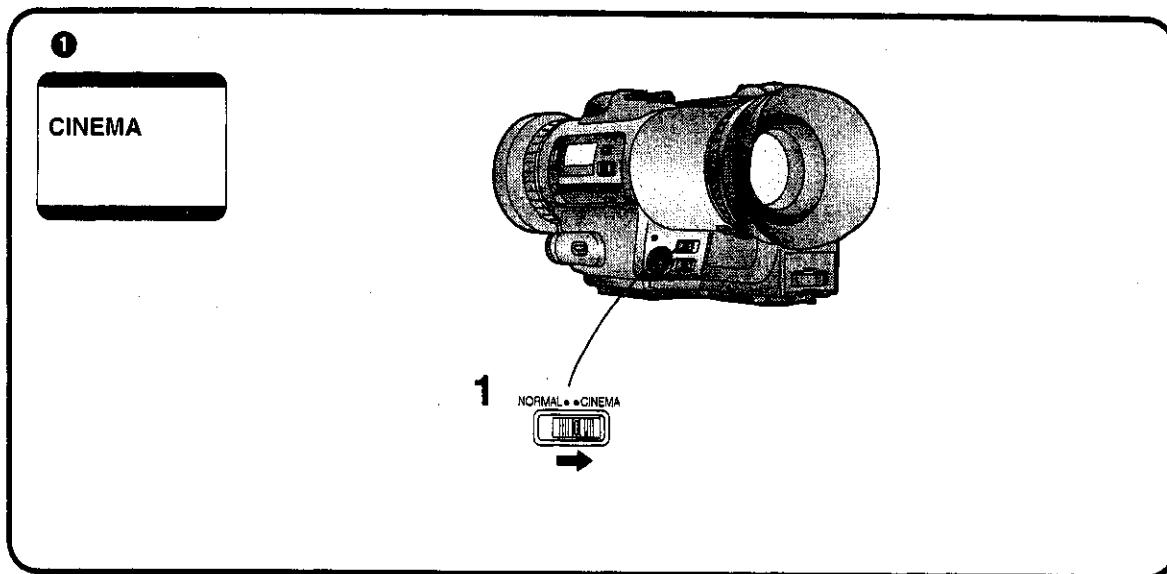
CINEMA

1 NORMAL ● ●CINEMA

Recording in the Cinema Mode

When you record scenes in this mode, you can play them back in a "cinema-like" format on an ordinary TV.

1 Set the [NORMAL/CINEMA] Switch to [CINEMA].

● The picture in the Finder appears as shown in illustration ❶.

■ **To Cancel the Cinema Mode:**
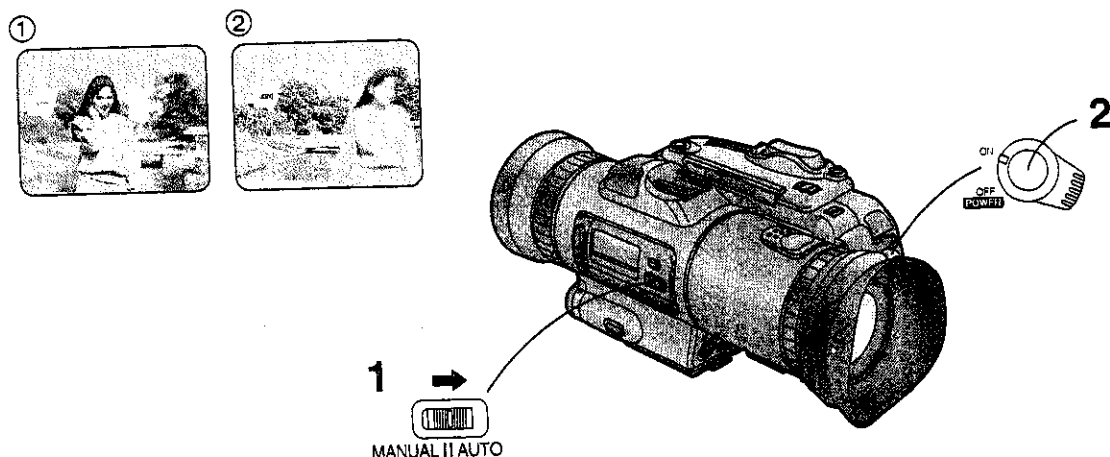Reset the [NORMAL/CINEMA] Switch to [NORMAL].

怎樣用電影狀態攝影

當您用該狀態拍攝場景時，便可在一般的電視機上播放"像電影一樣"的畫面。

1 將[NORMAL/CINEMA]開關設置在[CINEMA]。

● 尋像器中的畫面將如圖所示❶。

■ 取消電影狀態時：
將 [NORMAL/CINEMA] 開關重新設置在 [NORMAL]。

① ②

1 → MANUAL Ⅱ AUTO

2

Recording in the Full Auto Mode

The Full Auto Mode is ideal for most recording situations as it lets you concentrate on your subject and the creative aspects of recording.
In this mode, the Movie Camera automatically performs the following three adjustments:

❶ White Balance (tint adjustment)

❷ Focus (sharpness adjustment)

❸ Iris/Gain (brightness adjustment)

Before starting to record in the Full Auto Mode...

1 Confirm that the [MANUAL/AUTO] Switch is set to [AUTO].

2 Press the Start/Stop Button to start recording.

♥ The focus is automatically adjusted to the subject in the centre of the Finder. Aim the Movie Camera so that the subject is in the centre of the Finder as shown in illustration ①.

① Correct

② Wrong

怎樣以全自動狀態攝影

當您想用最佳攝影狀況集中在目標物上，並進行創造性攝影時，全自動狀態將會成爲您的得力助手。
在此狀態下，攝錄影機會自動完成下列三項調節：

❶ 白色平衡（色度調節）

❷ 聚焦（清晰度調節）

❸ 光圈/超高塱敏度（亮度調節）

用全自動狀態開始攝影之前……

1 確認[MANUAL/AUTO]開關設置在[AUTO]。

2 按 Start/Stop 鈕，開始攝影。

♥ 將自動對尋像器中心的目標物進行聚焦。請如圖①所示，對好攝錄影機，使目標物位於尋像器的中心。

① 正確

② 錯誤

-84-

☞ For the following subjects and recording situations, using the Manual Mode will provide more beautiful pictures. Read the pages related to the indicated manually adjustment.

■ **Subjects and Recording Conditions Not Suitable for Recording in the Full Auto Mode (unsuitable adjustment in parentheses)**

☞ Subjects with dark surfaces (White Balance, Focus, Brightness)

☞ When moving the Movie Camera moving from outdoors to indoors while recording (White Balance)

☞ Subjects lit by different light sources (White Balance)

☞ Subjects with shiny surfaces or much light reflection (Focus)

☞ Subjects with weak contrast (Focus)

☞ Subjects with a part of it near and another part far away from the Movie Camera (Focus)

☞ Subjects without vertical contours (Focus)

☞ Subjects with fast movement (Focus)

☞ Subjects behind moving objects (Focus)

☞ Subjects behind glass covered by dirt, dust or water drops (Focus)

White Balance: Recording with Manual White Balance (➜ 88)

Focus: Recording with Manual Focus (➜ 98)

Brightness: Recording with Manual Brightness Adjustment (➜ 100)

☞ 在下列目標物和攝影狀態下，使用手動狀態將提供更美麗的圖像。請閱讀與表示的調節有關的頁號。
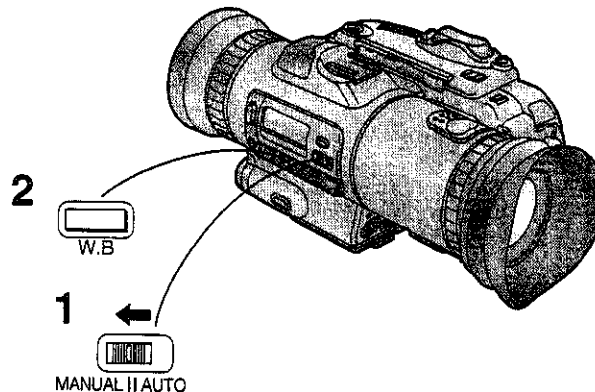
■ 在全自動狀態下，不適合於攝影的目標物和攝影狀況(不能進行括號內所述調節)

☞ 黑暗裏面的目標物(白色平衡、聚焦、光圈)
☞ 在攝影中，將攝錄影機從室外移向室內時(白色平衡)
☞ 由不同光源照射的目標物(白色平衡)
☞ 有光澤或光線反射太強的目標物(聚焦)
☞ 反差太少的目標物(聚焦)
☞ 一部分靠近攝錄影機而另一部分離得太遠的目標物(聚焦)
☞ 無垂直輪廓的目標物(聚焦)
☞ 快速移動的目標物(聚焦)
☞ 在移動物體後面的目標物(聚焦)
☞ 位於布滿髒污、灰塵或水滴的玻璃後面的目標物(聚焦)

白色平衡：怎樣用手動白色平衡攝影(➜88)
聚焦： 怎樣用手動聚焦攝影(➜98)
亮度： 怎樣用手動亮度調節攝影(➜100)

2 W.B

1 ←

MANUAL II AUTO

Recording with Manual White Balance

The Manual White Balance function lets you manually adjust the Movie Camera to ensure natural colours under lighting conditions for which the Full Auto Mode is not suitable. There are 3 different White Balance Modes: 2 presets (Indoor Incandescent Lamp Mode and Outdoor Mode) (→ 90) and 1 mode for manually adjusting the white balance to other types of lighting (Manual White Balance Set Mode) (→ 92). These 3 modes are indicated by different indications in the Finder for easy selection while viewing in the Finder.

1 Set the [MANUAL/AUTO] Switch to [MANUAL].

2 View in the Finder and press the [W.B] Button until the desired Indication appears in the Finder.

怎樣用手動白色平衡攝影

手動白色平衡功能可讓您手動調節攝錄影機，以便在不適合使用全自動狀態的燈光條件下，確保自然色彩。有三種不同的白色平衡狀態：2種預設（室內白熾燈狀態和室外狀態）(→90) 和1種用於其它光源之下進行手動白色平衡調節的狀態（手動白色平衡設定狀態）(→92)。這三種狀態由尋像器中不同的指示來區分，以便在觀看尋像器中簡單地進行選擇。

1 將[MANUAL/AUTO]開關設置在[MANUAL]。

2 觀看尋像器，並按 [W.B] 鈕，直至需要的指示出現在尋像器中。

● 當需要的指示出現在尋像器中時，便可開始攝影。

■ Lighting Condition and Indications

♥ At every press of the [W.B] Button, the Indication changes in the following order:

No indication→ ☼→ ☀→ ☀ ─────────
(Automatic)
↑
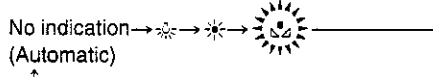
To select the optimum mode for recording under special lighting conditions, refer to the chart below.

Lighting Condition and Indications	Mode
❶ **Indoor Incandescent Lamp Mode** Fixed white balance value for recording under indoor lighting ● Incandescent lamps, halogen lamps	☼
❷ **Outdoor Mode** Fixed white balance value for recording outdoors under a blue sky ● Sunlight	☀
❸ **Manual White Balance Set Mode** **(→ 92)** When this indication is flashing, the previous (automatically adjusted) white balance value is maintained. ● Mercury lamps, natrium lamps, some types of fluorescent lamps ● Lights in a banquet hall of a hotel or spotlights in a theatre ● Sunrise or sunset	☀

■ To Cancel the Manual White Balance Mode:

Set the [MANUAL/AUTO] Switch to [AUTO] or press the [W.B] Button repeatedly until none of the White Balance Mode Indications is visible in the Finder any longer.

♥ For more information on White Balance Adjustment: **(→ 148)**

■ 燈光條件和指示

選擇特殊燈光條件之下的最佳攝影狀態時，請參看下表。

♥ 每次按 [W.B] 鈕，指示將依下列順序改變：

無指示→ ☼ → ☀ → ☀ ─────
（自動）
↑
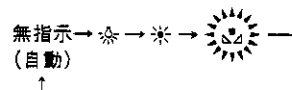
燈光條件和指示	狀態
❶ 室內白熾燈狀態（預設值） 用於室內燈光下攝影的固定白色平衡值 ● 白熾燈、鹵素燈	☼
❷ 室外狀態（預設值） 用於室外藍天下攝影的固定白色平衡值 ● 陽光	☀
❸ 手動白色平衡設定狀態 （用於其它光源之下的自由調節）（→92） 當該指示閃爍時，以前的設定（將保持自動調節的白色平衡值） ● 水銀燈、鈉蒸氣燈、某些類型的熒光燈 ● 旅館宴會廳的燈光或劇院的點光燈 ● 日出或日落	☀

■ 取消手動白色平衡狀態時：

將[MANUAL/AUTO]開關設置在[AUTO]，或重復按[W.B]鈕，使尋像器中不再出現任何白色平衡指示。

♥ 有關白色平衡調節的更多細節：（→148）
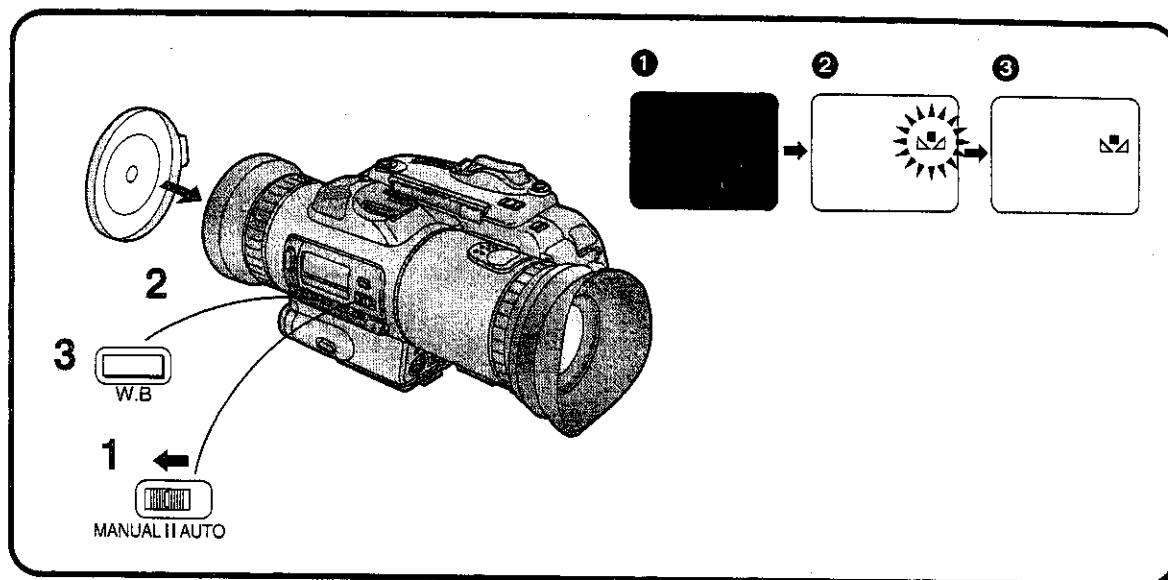
■ Manual White Balance Set Mode

Use this mode for recording under special lighting conditions (mercury lamps, natrium lamps, some types of fluorescent lamps, sunrise, sunset, etc.).

Or use it when you want to manually adjust the white balance for each new scene, as professionals do it.

1 Set the [MANUAL/AUTO] Switch to [MANUAL].

2 Attach the White Lens Cap and zoom in until the entire Finder Screen is white.

♥ Instead of using the White Lens Cap, you can zoom in on a sheet of pure white paper.

3 Aim the Movie Camera at the subject that you want to record and then keep pressing the [W.B] Button until the [◣◹] Indication in the Finder stops flashing and remains lit.

❶ During the black balance adjustment

❷ During the white balance adjustment (flashes)

❸ The black and the white balance adjustments are finished.

●Start the recording.

■ 怎樣手動調節白色平衡

該狀態可用於特殊燈光(水銀燈、鈉蒸氣燈、某些類型的熒光燈、拂曉、傍晚等)之下的攝影。
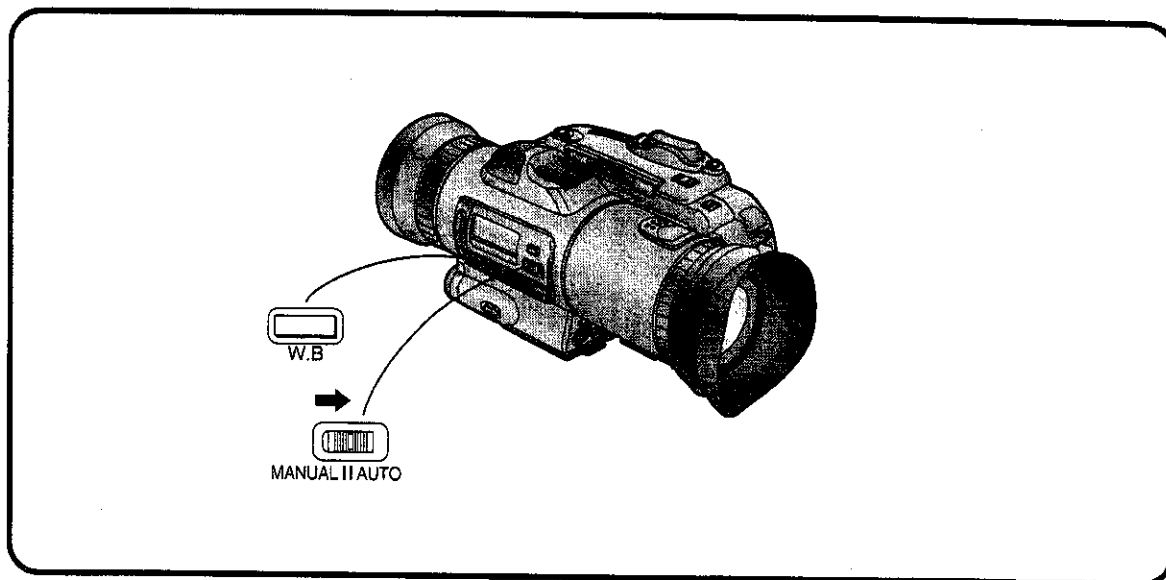
或者當您如專家一樣,對每個新的場景,想用手動調節白色平衡時,可使用該狀態。

1 將[MANUAL/AUTO]開關設置在[MANUAL]。

2 裝上白色鏡頭蓋,進行拉近,直到整個尋像器屏幕變爲白色。

♥您還可拉近純白紙張,來代替使用白色鏡頭蓋。

3 將攝錄影機對準您打算攝錄的目標物,然後持續按住[W.B]鈕,直至尋像器中的[◣◹]指示停止閃爍,並保持亮起爲止。

❶ 在黑色平衡調節中
❷ 在白色平衡調節中(閃爍)
❸ 黑色和白色平衡調節結束時
●開始攝影。

W.B

MANUAL∥AUTO

☞ During the short moment before the [ﾑ] indication is displayed, a clacking sound is heard and the screen becomes dark. This is normal when the Movie Camera adjusts the white balance and it is not a defect.

☞ When recording a subject under weak lighting by fluorescent lamps with a high shutter-speed, the [ﾑ] Indication may flash slowly to indicate that manually adjusting in the White Balance Set Mode is not possible. In this case, use the Full Auto Mode instead.

☞ During operation of the Movie Camera, the [ﾑ] Indication may flash. This indicates that the manually adjusted white balance setting will be maintained until you manually adjust the white balance again or record again with Auto White Balance.

♥ To ensure optimum colour reproduction, it is recommended that you adjust the white balance for each new scene.

■ **To Cancel the Manual White Balance Mode:**
Press the [W.B] Button to make the [ﾑ] Indication disappear.
Or reset the [MANUAL/AUTO] Switch to [AUTO].

☞ 在顯示 [ﾑ] 指示之前的片刻，會聽見活門的聲音，且屏幕變黑。這是正常現象，因為攝錄影機正在調節白色平衡，而非故障。

☞ 當以高快門速度，在熒光燈的微弱光線下拍攝目標物時，[ﾑ] 指示可能會慢慢閃爍，表示不能在白色平衡設定狀態下進行手動調節。在此情況下，請用全自動狀態來代替。

☞ 在攝錄影機操作中，[ﾑ] 指示可能會閃爍。這說明手動調節的白色平衡設定將被保存，直到您再次手動調節白色平衡或再次用自動白色平衡進行攝影為止。

♥ 為了確保最佳色彩再生，建議您對每個新場景最好都進行白色平衡調節。

■ 取消手動白色平衡狀態時：
按 [W.B] 鈕，使 [ﾑ] 指示消失。
或將 [MANUAL/AUTO] 開關重新設置在 [AUTO]。

10 000K		❷
9 000K		
8 000K		❸
7 000K		
6 000K		❹
5 000K		❺
	❻	
4 000K	❼	
	❽	
3 000K	❾	
	❿	
2 000K	⓫	
⓬		
1 000K		
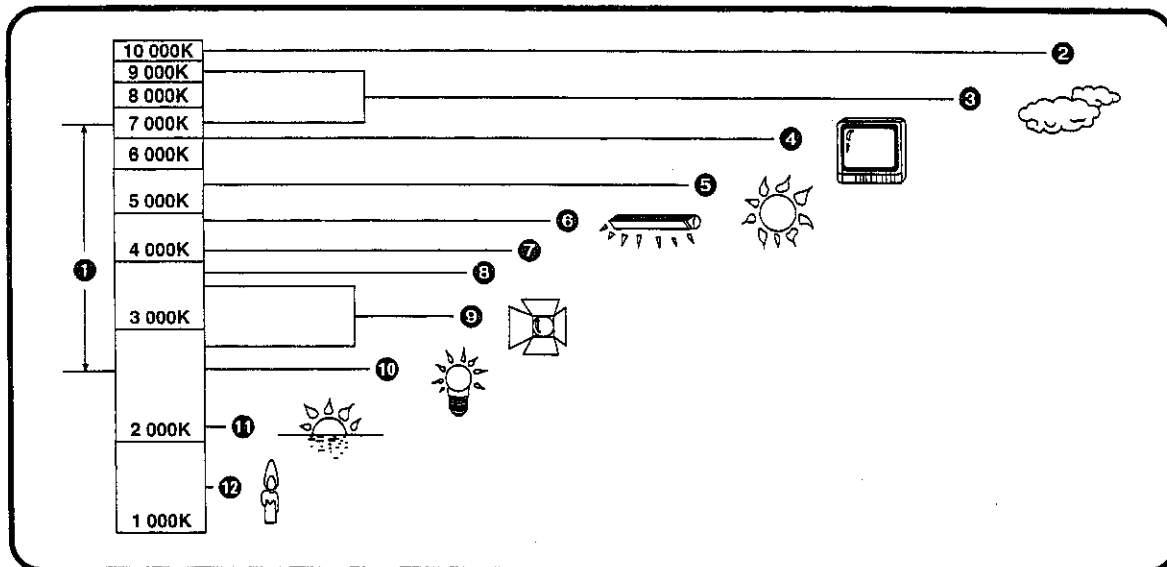
Colour Temperature and White Balance

Every light source has its own colour temperature and this is measured in Kelvin (K). The higher the Kelvin value is, the more bluish is the light; the lower the value, the more reddish is the light. The Kelvin value is related to the tint of the light, but not directly to its brightness. The range ❶ indicated in the illustration above shows the light sources for which this Movie Camera can provide precise white balance adjustment and, therefore, natural colours in the recorded pictures, in the Full Auto Mode. For light sources outside this range, adjust the white balance manually (➔ 88). Also, additional lighting may be necessary.

❶ Control range of this Movie Camera's Auto White Balance

❷ Blue sky

❸ Cloudy sky

❹ TV screen

❺ Sunlight

❻ White fluorescent lamp

❼ 2 hours after sunrise or before sunset

❽ 1 hour after sunrise or before sunset

❾ Halogen light bulb

❿ Incandescent light bulb

⓫ Sunrise or sunset

⓬ Candlelight

中 文

色溫和白色平衡

每種光源都有其獨特的色溫,其值由開氏溫標(K)測量。開氏值越高,光越帶藍色;開氏值越低,光越泛紅色;開氏值與光源的色調有關,而與其亮度沒有直接關係。
上圖所示範圍❶,表示用本攝錄影機在全自動狀態下,可提供精確的白色平衡調節的光源,而且,在攝製的畫面中可獲得自然色彩。對於此範圍之外的光源,請手動調節白色平衡(➔88)。而且,還可能需要附加的光源。

❶ 本攝錄影機的自動白色平衡的控制範圍
❷ 藍天
❸ 陰天
❹ 電視機屏幕
❺ 陽光
❻ 白色熒光燈
❼ 日出後或日落前的兩小時
❽ 日出後或日落前的一小時
❾ 鹵素燈
❿ 白熾燈
⓫ 日出或日落
⓬ 燭光
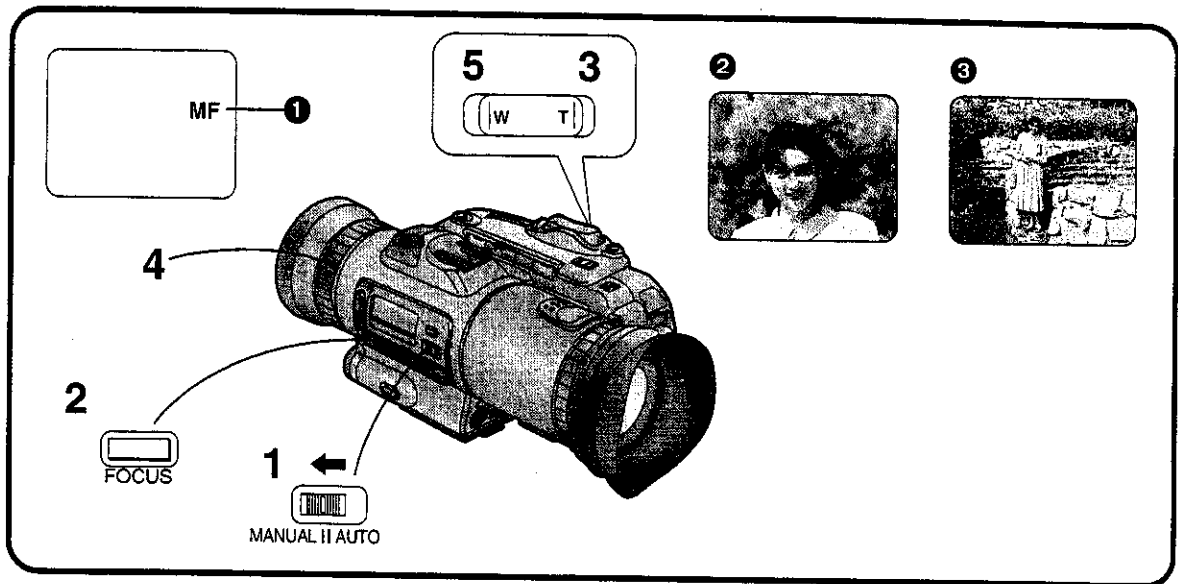
Recording with Manual Focus

1 Set the [MANUAL/AUTO] Switch to [MANUAL].

2 Press the [FOCUS] Button.
- The [MF] Indication ❶ appears in the Finder. ([MF] means Manual Focus.)

3 Keep pressing the [T] Zoom Button to zoom in on the subject ❷.

4 Turn the Focus Ring to adjust the focus.

Adjusting the focus after zooming in on the subject ensures that it will remain precisely focused when you zoom out ❸.

5 Press the [W] Zoom Button to zoom out as desired.

■ **To Cancel the Manual Focus Mode:**
Press the [FOCUS] Button to make the [MF] Indication disappear.
Or reset the [MANUAL/AUTO] Switch to [AUTO].

怎樣用手動聚焦攝影

1 將[MANUAL/AUTO]開關設置在[MANUAL]。

2 按 [FOCUS] 鈕。
- [MF] 指示❶出現於尋像器中。 ([MF]意思為手動聚焦。)

3 持續按住 [T] 變焦鈕，拉近目標物❷。

4 旋轉聚焦環，調節聚焦。

在拉近目標物之後調節聚焦，確保拉遠❸時也能保持精確的聚焦。

5 按 [W] 變焦鈕，根據需要進行拉遠。

■ 取消手動聚焦狀態時：
按 [FOCUS] 鈕，使 [MF] 指示消失。
或將 [MANUAL/AUTO] 開關重新設置在 [AUTO]。

```
1/50
►F5.6 ──── ❶
```

3

2

1

MANUAL ‖ AUTO

Recording with Manual Brightness Adjustment

There are 2 methods for manual brightness adjustment:
1) Adjusting the Iris
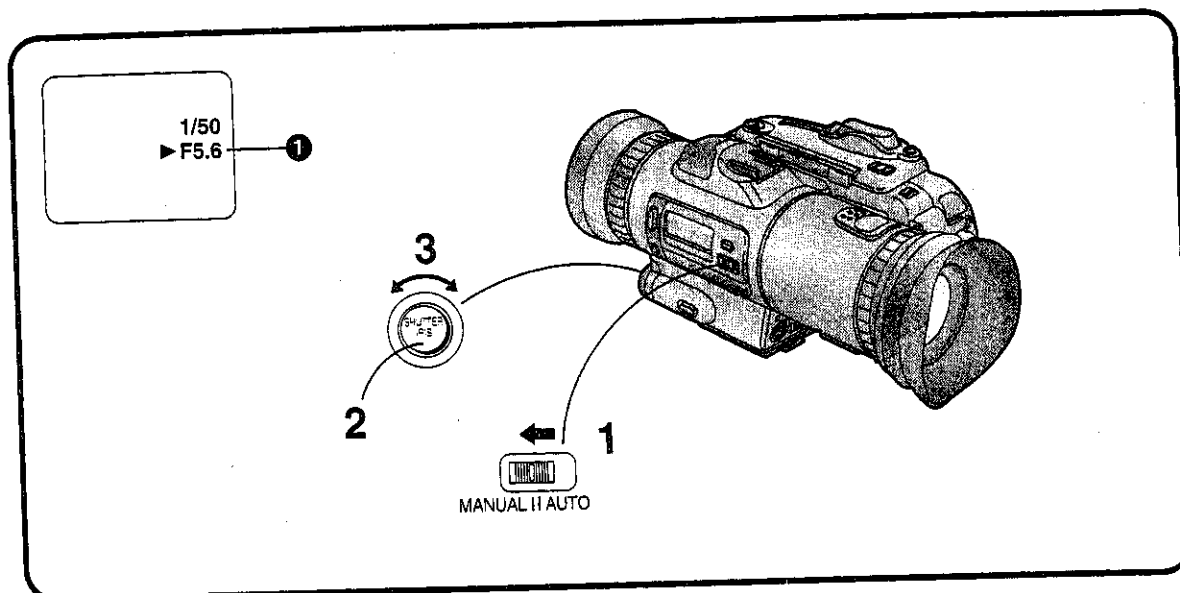2) Adjusting the Gain

1) Adjusting the Iris (F Number)

This function lets you manually adjust the brightness of the picture to compensate backlight, extremely bright lighting and surroundings.

1 Set the [MANUAL/AUTO] Switch to [MANUAL].

2 Press the [SHUTTER/IRIS] Button.
   ●The [►] mark appears next to the [F] Indication ❶.

3 Turn the [SHUTTER/IRIS] Control clockwise or counterclockwise to select the desired F Number (iris value).

■ Range of Selectable F Number

OPEN, F1.7, F2.0, F2.4, F2.8, F3.4, F4.0, F4.8, F5.6, F6.8, F8.0, F9.6, F11, F14, F16, CLOSE

The higher the value, the less light enters through the Movie Camera's lens. To make the picture brighter, select a lower value. However, this also decreases the depth of field, i.e. the distance range within which the subject can be sharply focused.

■ To Cancel the Manual Iris Mode:

Press the [SHUTTER/IRIS] Button.
Or reset the [MANUAL/AUTO] Switch to [AUTO].

☞ In case of extremely strong backlight, it may not be possible to brighten up the subject sufficiently.
☞ When compensating for backlighting of a subject, a blue sky may become whitish.
☞ Depending on the angle at which sunlight falls on the subject, light reflexes may be recorded in the picture.

怎樣用手動亮度調節攝影

手動亮度調節有兩種方法：
1) 光圈調節
2) 超高靈敏度調節

1) 光圈調節(F指數)

該功能可讓您手動調節畫面亮度，以補償逆光、特強的亮光和環境光。

1 將[MANUAL/AUTO]開關設置在[MANUAL]。

2 按 [SHUTTER/IRIS] 鈕。
   ●[F] 指示 ❶ 出現後，會出現 [►] 標誌。

3 順時針或逆時針旋轉 [SHUTTER/IRIS] 控制，選擇需要的F指數(光圈值)。
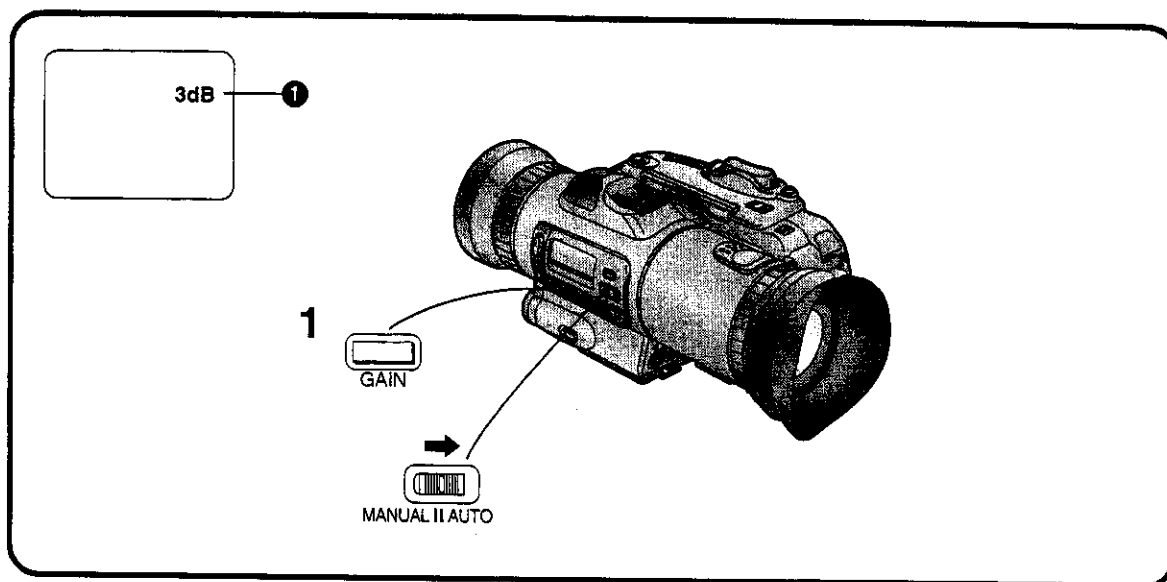
■ F指數的選擇範圍

OPEN(全開)、F1.7、F2.0、F2.4、F2.8、F3.4、F4.0、F4.8、F5.6、F6.8、F8.0、F9.6、F11、F14、F16、CLOSE(全閉)

該值越大，通過攝錄影機鏡頭的光線越少。使畫面更亮時，請選擇低值。然而，這也會降低視野深度，比如目標物可以被鮮明聚焦的距離範圍等。

■ 取消手動光圈狀態時：

按住 [SHUTTER/IRIS] 鈕。
或將 [MANUAL/AUTO] 開關重新設置在 [AUTO]。

☞ 在逆光特強的情況下，可能無法使目標物足夠明亮。
☞ 進行目標物的逆光補償時，藍天可能會泛白。
☞ 根據照射落在目標物上的角度不同，畫面中可能會攝製反光。

3dB — ❶

1

GAIN

MANUAL‖AUTO

2) Adjusting the Gain

When recording dimly lit scenes, this function lets you manually adjust the gain to electronically increase the brightness of the picture.

1 **Press the [GAIN] Button repeatedly until the desired Gain value ❶ is indicated in the Finder.**

■ Range of Selectable Gain Values

No indication, 0 dB, 3 dB, 6 dB, 9 dB, 12 dB

The higher the value is, the more brightly the picture is recorded. However, this also results in increase picture noise.

☞ The manually adjusted gain value is maintained even if you turn the Movie Camera off and later on again.

☞ Under very dim lighting, even selecting [12 dB] may not sufficiently brighten the picture.

■ To Cancel the Manual Gain Mode

Press the [GAIN] Button until none of the above Gain Value Indications is displayed in the Finder.
Or reset the [MANUAL/AUTO] Switch to [AUTO].

2）超高靈敏度調節

當拍攝暗光場景時，該功能可讓您手動調節超高靈敏度，使畫面亮度得到電子補光。

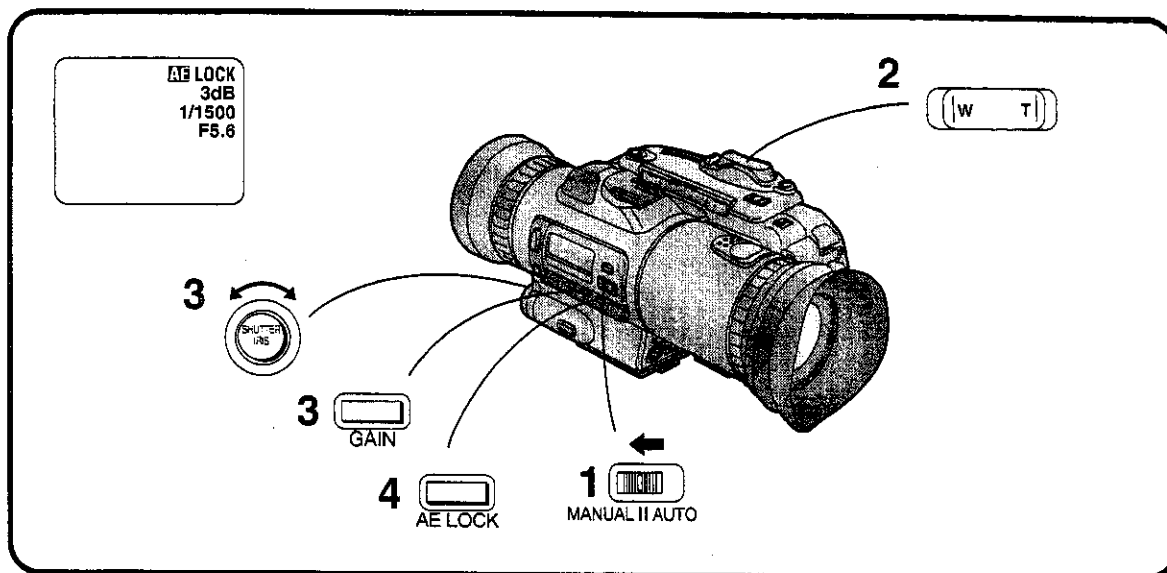**1** **重復按 [GAIN] 鈕，直到需要的超高靈敏度值 ❶顯示於尋像器中。**

■ 超高靈敏度值的可選擇範圍

無指示、0dB、3dB、6dB、9dB、12dB

該值越高，攝影的畫面越明亮。然而，這也會導致畫面雜波增加。

☞ 即使您關閉攝錄影機，並在以後再次打開，手動調節的超高靈敏度值也會被保存。

☞ 在非常微弱的燈光之下，即使選擇了 [12dB]，畫面亮度也可能會不夠。

■ 取消手動超高靈敏度狀態時

按 [GAIN] 鈕，直到上述超高靈敏度指示都不顯示於尋像器中。
或將 [MANUAL/AUTO] 開關重新設置在 [AUTO]。

AE LOCK
3dB
1/1500
F5.6

2

[W T]

3
SHUTTER/IRIS

3 GAIN

4 AE LOCK   **1** MANUAL II AUTO

Recording with Fixed Brightness (AE Lock Function)

The AE Lock Function lets you record a subject with the same brightness. For example, when you follow a person who moves from a bright to a dark place, or vice versa, this function prevents that the person's face becomes brighter or darker.

1 Set the [MANUAL/AUTO] Switch to [MANUAL].

2 Press the [T] Zoom Button to zoom in on the subject.

3 Manually adjust the iris (→ 100) and/or gain (→ 102), if necessary, to adjust for optimum brightness of the subject.

4 When the desired indication appears in the Finder, press the [AE LOCK] Button to lock it.

♥ If you want to change the brightness by changing the shutter speed, press the [AE LOCK] Button again, and then adjust the brightness by turning the [SHUTTER/IRIS] Control.

☞ Pressing the [SHUTTER/IRIS] Button for more than 2 seconds resets the F number, shutter speed and gain value.

■ **To Cancel the AE Lock Function**
Press the [AE LOCK] Button.
Or reset the [MANUAL/AUTO] Switch to [AUTO].

怎樣用固定亮度攝影 (AE鎖定功能)

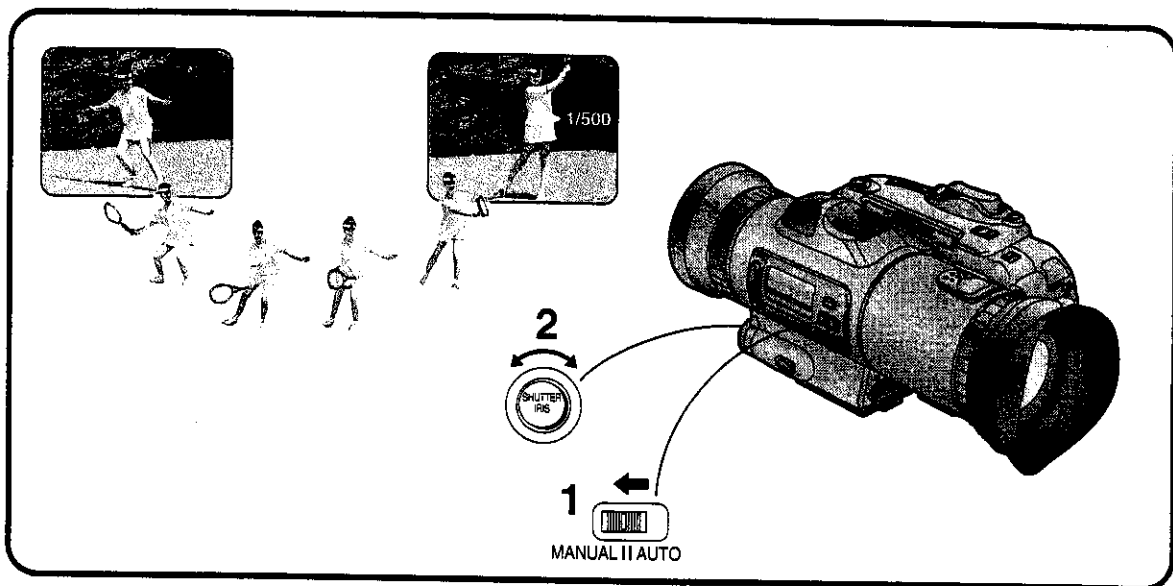AE鎖定功能也可讓您用同樣的亮度拍攝目標物。例如，當您從亮處到暗處，追拍某人，或者相反時，該功能可防止人的面部變白和變黑。

1 將[MANUAL/AUTO]開關設置在[MANUAL]。

2 按 [T] 變焦鈕，拉近目標物。

3 如有必要，手動調節光圈(→100) 和/或超高靈敏度 (→102)，使目標物的亮度達到最佳。

4 當尋像器中出現需要的指示時,請按[AE LOCK] 鈕，將其鎖定。

♥ 如果您打算調節快門速度來改變亮度的話，請再次按 [AE LOCK]鈕,然後旋轉[SHUTTER/IRIS]控制來調節亮度。

☞ 按住 [SHUTTER/IRIS] 鈕 2 秒鐘以上，可使F指數、快門速度和超高靈敏度值復原。

■ 取消AE鎖定功能時
按 [AE LOCK] 鈕。
或將 [MANUAL/AUTO] 開關重新設置在 [AUTO]。

Recording Fast-moving Subjects

Using a high shutter speed is recommended for scenes with fast movement such as car races and golf swings, which you want to watch in slow motion for motion analysis.

☞ The faster a shutter speed you select, the more brightly the subject should be lit.

1 Set the [MANUAL/AUTO] Switch to [MANUAL].
   ● The [▶] Mark is displayed next to the Shutter Speed Indication in the Finder.

2 Turn the [SHUTTER/IRIS] Control clockwise or counterclockwise to select the desired shutter speed.

■ **Range of Selectable Shutter Speed**
1/50, 1/100, 1/125, 1/180, 1/250, 1/350, 1/500, 1/750, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/8000 s

■ **To Return to the Normal Recording Mode:**
Press the [SHUTTER/IRIS] Button for more than 2 seconds. Or Set the [MANUAL/AUTO] Switch to [AUTO].

怎樣拍攝快速移動目標物

對於您想用慢動作進行運動分析的賽車和高爾夫等快速移動的場面，建議使用較高的快門速度。
☞ 您選擇的快門速度越快、目標物應該照得越亮。

1 將[MANUAL/AUTO]開關設置在[MANUAL]。
   ● 快門速度指示出現於尋像器中後，接著會顯示 [▶] 標誌。

2 順時針或逆時針旋轉 [SHUTTER/IRIS] 控制，選擇需要的快門速度。

■ 快門速度的變化順序
1/50、1/100、1/125、1/180、1/250、1/350、1/500、1/750、1/1000、1/1500、1/2000、1/3000、1/4000、1/8000秒

■ 恢復標準攝影狀態時：
按住 [SHUTTER/IRIS] 鈕 2 秒鐘以上，或將[MANUAL/AUTO]開關設置在 [AUTO]。
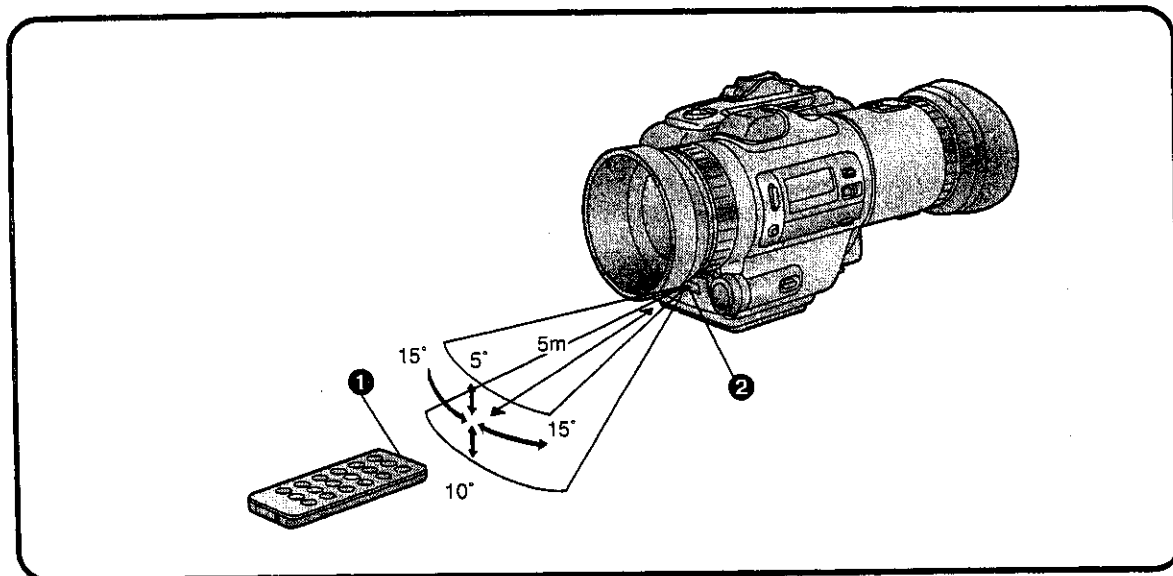
Using the Remote Controller

The Remote Controller lets you take part in the action and control the recording operation from in front of the Movie Camera. It is also convenient for controlling the playback functions for playback via a TV or for dubbing.

☞ Do not cover the Transmitter Window ❶ on front of the Remote Controller with your hand, cloth, etc. when using the Remote Controller.

☞ The Remote Controller may not operate correctly under following conditions.
  ●When direct sunlight falls on the Transmitter Window or the Remote Control Sensor ❷.
  ●When using the Remote Controller near a fluorescent lamp.
  ●When the Remote Controller is used too close to the Movie Camera.
  ●When using the Remote Controller outdoors or the distance to the Movie Camera from it is more than 5 metres.

怎樣使用遙控器

遙控器可讓您在攝錄影機的前面，一邊參入表演，一邊控制攝影操作。也便於在電視機上放影或拷貝中，進行放影功能的控制。

☞ 使用遙控器時，勿用手、布等遮住遙控器上的紅外線發射窗 ❶。
☞ 在下列狀況下，遙控器可能無法正常操作。
● 當陽光直接照射在發射窗或遙控感應窗 ❷ 上時。
● 當靠近熒光燈使用遙控器時。
● 當過於靠近攝錄影機進行使用時。
● 當在室外，離開攝錄影機的距離超過5m以上來使用遙控器時。
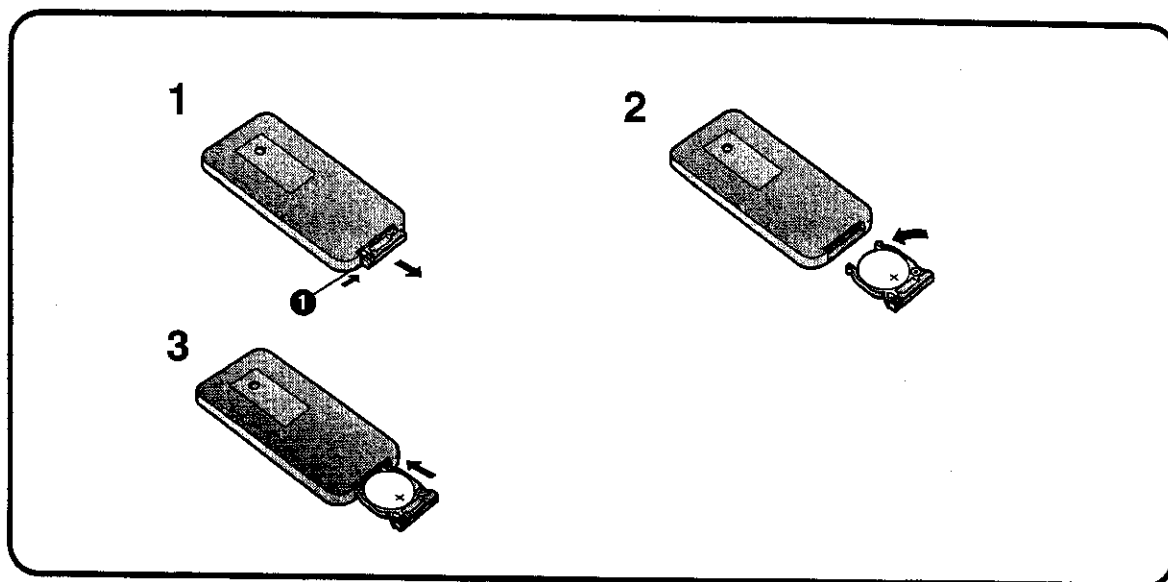
■ **Inserting the Button-Type Battery**

1 Pull out the Battery Holder while pushing the Stopper ❶.

2 Insert the Battery with the stamped (+) mark facing upward as shown in the illustration.

3 Insert the Battery Holder into the Remote Controller.

■ **Replacing the Button-Type Battery**

The life of the battery is about 1 year.
When the battery is exhausted, be sure to purchase a new CR2025 Battery and replace in the same way as explained above.

CAUTION

Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the equipment manufacturer. Discard used batteries according to manufacturer's instructions.

中 文

■ 怎樣插入鈕扣式電池

1 按塞子❶，取出電池座。
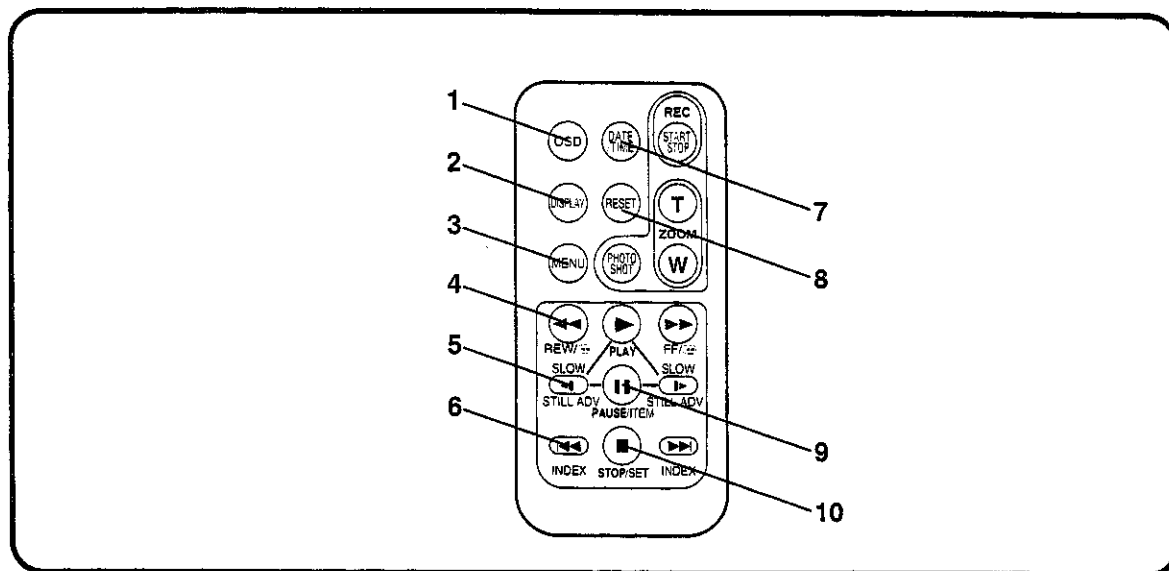
2 如圖所示，插入電池時，請將打印的(＋)標誌朝上。

3 將電池座放入遙控器。

■ 怎樣更換鈕扣式電池

電池壽命約爲一年。
當電池耗盡時，必需購買新的CR2025型電池，並以上述同樣的方法進行更換。

注意事項：

如果電池更換不當，則會發生危險和爆炸。請只用該設備廠家推薦的同類或相等電池。請遵照廠家說明處理用過的電池。

Buttons on the Remote Controller

☞ The buttons with the same mark as on the Movie Camera have generally the same function. Those buttons that have a different function on the Remote Controller, are marked with ◆. Refer to relevant pages.

◆ 1 **[OSD] Button (→ 36)**
  ●For displaying the function and operation indications in the Finder on a connected TV. This function is only possible with the Remote Controller.

2 **[DISPLAY] Button (→ 118)**
  ●For changing the Indications in the Finder.

3 **[MENU] Button (→ 46, 52)**
  ●For using the Menu Function.

4 **[◄◄] Button (→ 34, 38, 40)**
  ●For rewinding the tape.

◆ 5 **[◄ SLOW/STILL ADV] Button (→ 116)**
  ●For slow or still advance playback in reverse direction. Also use this button to select the Remote Controller Mode. These functions can only be operated with the Remote Controller.

◆ 6 **[◄◄ INDEX] Button (→ 120, 122)**
  ●For rewinding the tape in the [VCR] Mode to search for the beginning of a recorded scene. This function can only be operated with the Remote Controller.

7 **[DATE/TIME] Button (→ 72)**
  ●For making the date and time indication appear or disappear in the picture during recording and playback.

8 **[RESET] Button (→ 118)**
  ●For resetting the Tape Counter to zero.

9 **[❙❙] Button (→ 40, 42, 124, 128)**
  ●For still playback.

10 **[■] Button (→ 34, 116, 128)**
  ●For stopping such tape transport functions as playback, fast-forwarding and rewinding. Also for selecting the Remote Controller Mode.

遙控器上的按鈕

:☞ 與攝錄影機標誌相同的按鈕, 一般具有相同的功能。遙控器上具有不同功能的按鈕, 則帶有◆標誌。請參看相關頁號。

◆ 1 [OSD]鈕(→36)
  ●用於在所連接的電視機上, 顯示尋像器中的功能和操作指示。該功能僅可由遙控器操作。

2 [DISPLAY]鈕(→118)
  ●用於改變尋像器中的指示。

3 [MENU]鈕(→46, 52)
  ●用於使用條目功能。

4 [◄◄]鈕(→34, 38, 40)
  ●用於倒轉磁帶。

◆ 5 [◄ SLOW/STILL ADV]鈕(→116)
  ●用於反向慢動作或靜止步進放影。也可使用該鈕來選擇遙控器狀態。這些功能只能由遙控器操作。

◆ 6 [◄◄ INDEX]鈕(→120, 122)
  ●用於在[VCR]狀態下倒轉磁帶, 以便尋找已錄場景的開頭部分。該功能只能由遙控器操作。

7 [DATE/TIME]鈕(→72)
  ●用於攝製日期和時間。

8 [RESET]鈕(→118)
  ●用於使磁帶計數器復原至零。

9 [❙❙]鈕(→40, 42, 124, 128)
  ●用於靜止放影。

10 [■]鈕(→34, 116, 128)
  ●用於停止放影、快進和倒帶等磁帶運行之類的功能。也可用於選擇遙控器狀態。
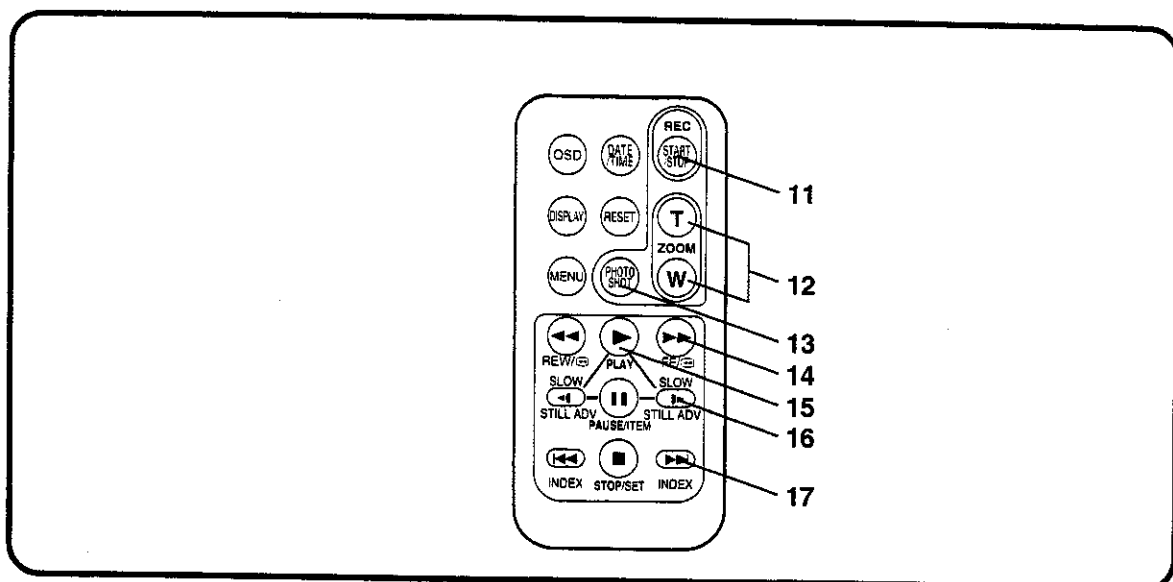
11 [REC START/STOP] Button (→ 24)
●For starting and pausing recording.

◆ **12 [W•T] Zoom Buttons (→ 22, 30)**
●For zooming in/out.
☞ As the Movie Camera functions by receiving infrared command signals, there is a slight delay between pressing the Button on the Remote Controller and the actual operation on the Movie Camera. For the same reason, the zooming continues a little after you release the corresponding zoom button.
☞ The Turbo Zoom Function does not work.

13 [PHOTO SHOT] Button (→ 80)
●For recording still pictures.

14 [►►] Button (→ 38, 40)
●For fast-forwarding the tape.

15 [►] Button (→ 34, 40, 42, 124, 128)
●For starting playback.

16 [I► SLOW/STILL ADV] Button (→ 42, 116)
●For slow or still advance playback in forward direction. Also use this button to select the Remote Controller Mode.

17 [►►I INDEX] Button (→ 120, 122)
●For fast-forwarding the tape in the [VCR] Mode to search for the beginning of a recorded scene. This function can only be operated with the Remote Controller.

11 [REC START/STOP]鈕(→24)
●用於開始和暫停攝影。

◆ 12 [W.T]鈕(→22, 30)
●用於拉近/拉遠。
☞ 由於攝錄影機是靠接收紅外線指令信號進行操作的，因此，從按遙控器上的鈕，到攝錄影機實際操作之間有稍微的延遲。由於同樣的原因，在您鬆開相應的變焦鈕之後，變焦還會繼續進行一會兒。
☞ 渦輪變焦功能不會工作。

13 [PHOTO SHOT]鈕(→80)
●用於拍攝靜止畫面。

14 [►►]鈕(→38, 40)
●用於快進磁帶。

15 [►]鈕(→34, 40, 42, 124, 128)
●用於開始放影。

16 [I► SLOW/STILL ADV]鈕(→42, 116)
●用於正向慢動作或靜止步進放影。也可使用該鈕來選擇遙控器狀態。

17 [►►I INDEX]鈕(→120, 122)
●用於在[VCR]狀態下快進磁帶，以便尋找已錄場景的開頭部分。該功能只能由遙控器操作。

OSD

DATE/TIME

REC START/STOP

DISPLAY

RESET

T ZOOM

MENU

PHOTO SHOT

W

REW/:: PLAY FF/::

SLOW SLOW

STILL ADV PAUSE/ITEM STILL ADV

INDEX STOP/SET INDEX

2   2
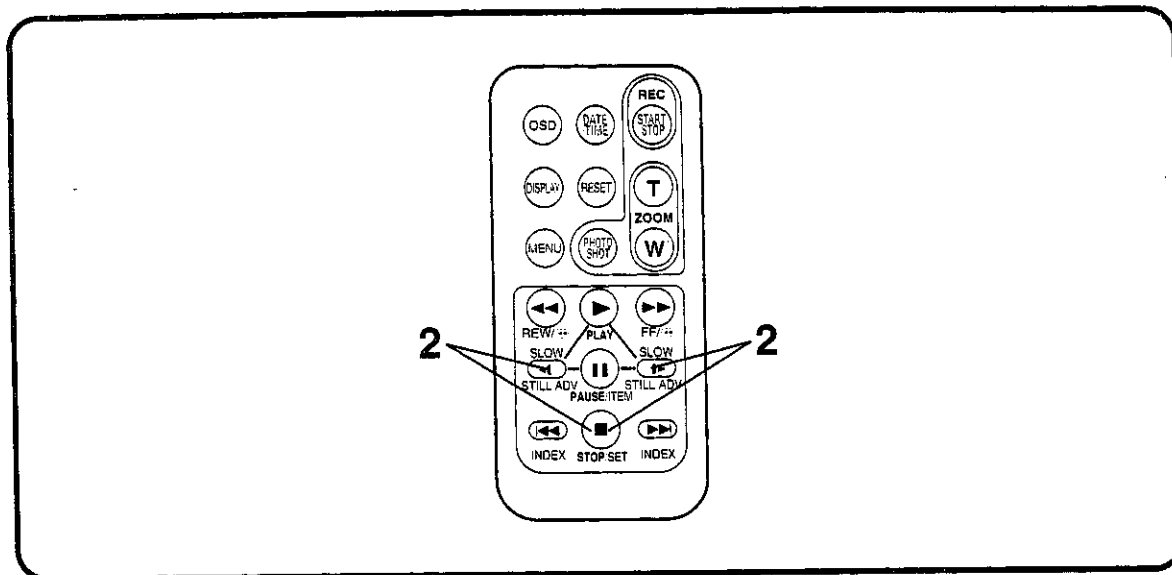
■ Selecting the Remote Controller Mode

With this one Remote Controller, you can operate 2 Movie Cameras of the same model.

♥ To be able to operate two Movie Cameras individually, you need to change the mode both on the Remote Controller and on the Movie Camera. The [VCR1] mode is initially selected before shipping. If the mode of the Movie Camera and of its Remote Controller are not matched, operating the Movie Camera with the Remote Controller is not possible and the [REMOTE] Indication is displayed in the Finder.

1 Select the desired mode for the item [REMOTE] by using the Menu Function. (→ 46)

(Select either in the VCR Mode Menu or in the Camera Mode Menu.)

2 To select [VCR2] Mode, simultaneously press the [■] Button and the [◄| SLOW/STILL ADV] Button on the Remote Controller.

To return to [VCR1] Mode, simultaneously press the [■] Button and the [|► SLOW/STILL ADV] Button on the Remote Controller.

☞ If you select [OFF] for the item [REMOTE] on the Menu, the Remote Controller cannot be operated.

☞ Replacing the button-type battery in the Remote Controller automatically resets it to the [VCR1] Mode.

■ 怎樣選擇遙控器狀態

使用這一個遙控器,可以操作兩台同樣型號的攝錄影機。

♥ 為了分別操作兩台攝錄影機, 需要改變遙控器和攝錄影機的狀態。[VCR1]狀態為出廠前的初期設定。如果攝錄影機的狀態, 與遙控器所具有的狀態不配, 便無法用遙控器操作攝錄影機, 且尋像器中會出現[REMOTE](遙控)。

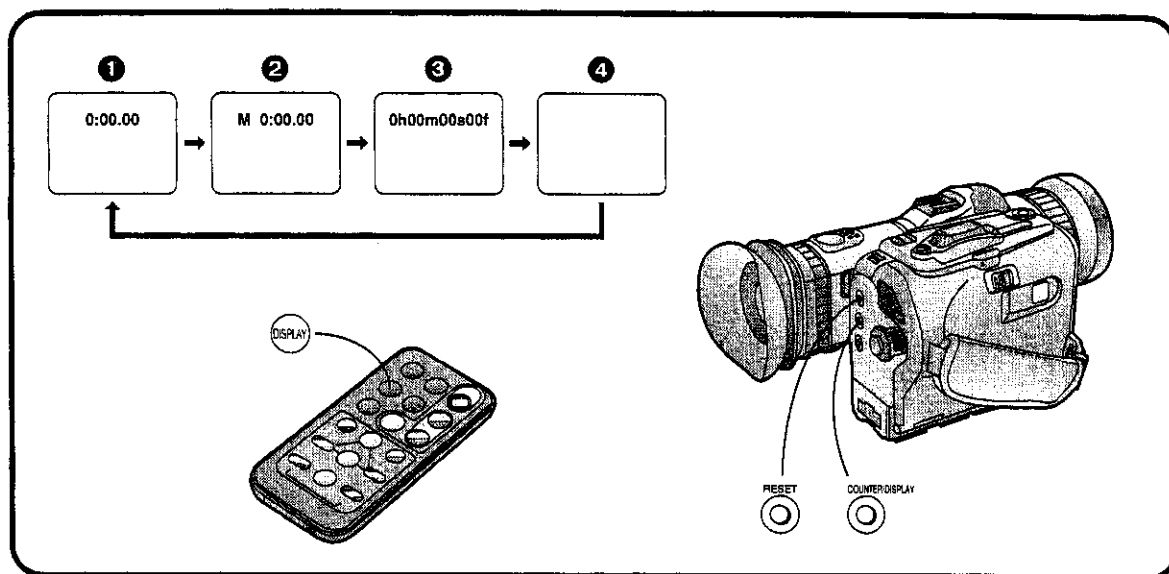**1** 用條目功能, 選擇 [REMOTE] 項目所需要的狀態(→46)。

(可以在VCR狀態條目或攝錄影機狀態條目下進行選擇。)

2 選擇[VCR2]狀態時, 請同時按遙控器上的[■]鈕和[◄| SLOW/STILL ADV]鈕。

恢復[VCR1]狀態時,請同時按遙控器上的[■]鈕和[|► SLOW/STILL ADV]鈕。

☞ 如果在[REMOTE]項目的條目中,選擇了[OFF],則遙控器將不能操作。

☞ 更換遙控器內的鈕扣式電池後,將自動使其復原至[VCR1]狀態。

Using the Tape Counter Indication

By changing the content of the Tape Counter Indication, it can be used in the following ways:

❶ Tape Counter Indication

It indicates the elapsed tape time hours, minutes and seconds.

When you press the [RESET] Button to reset the Tape Counter to [0:00.00] before starting to record, you can check at any time how long you have been recording. You can also use this indication as a guide to quickly access desired tape positions during fast-forwarding or rewinding in the [VCR] Mode.

❷ Memory Stop Function

This function stops the tape at the point where you have reset the Tape Counter to [0:00.00].

During playback, when you reach a scene that you want to play back again, press the [RESET] Button to reset the Tape Counter to [0:00.00]. Then press the [COUNTER/DISPLAY] Button on the Movie Camera (or the [DISPLAY] Button on the Remote Controller) to make the Memory Stop Indication [M] appear in front of the Tape Counter Indication. When you later rewind or fast-forward the tape, it automatically stops at the [M 0:00.00] position. ([M] means Memory.)

❸ Time Code Indication

This function indicates the elapsed time with higher precision, which is useful when you want to perform accurate editing.

([h] means hour, [m] means minute, [s] means seconds and [f] means frame.)

To change the Tape Counter Indication over to the Time Code Indication, press the [COUNTER/DISPLAY] Button on the Movie Camera (or the [DISPLAY] Button on the Remote Controller).

(1 frame=approx. 1/25th second)

❹ No Indication

怎樣使用磁帶計數器

改變磁帶計數器指示的內容後，可以用下列方法進行利用：

❶ 磁帶計數器指示

可表示已攝影磁帶時間的小時、分鐘和秒鐘。

開始攝影之前，如果按了 [RESET] 鈕，使磁帶計數器復原至 [0:00.00] 時，便可隨時檢查已經攝錄了多長時間。在 [VCR] 狀態下快進或倒轉磁帶時，您還可利用該指示作為指南，以便重新位於需要的磁帶位置。

❷ 記憶停止功能

該功能將使磁帶停止在磁帶計數器復原至 [0:00.00] 之點。放影中，當到達您想再次播放的場景時，請按 [RESET] 鈕，使磁帶計數器復原至 [0:00.00]。然後，按攝錄影機上的 [COUNTER/DISPLAY] 鈕 (或遙控器上的 [DISPLAY] 鈕)，使記憶停止指示 [M] 出現在磁帶計數器指示的前面。當您以後倒轉或快進磁帶時，本機會自動在 [M0:00.00] 位置停止。

([M] 意思為記憶。)

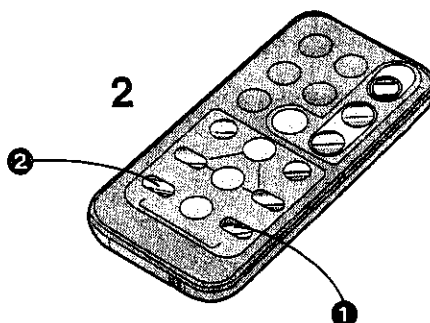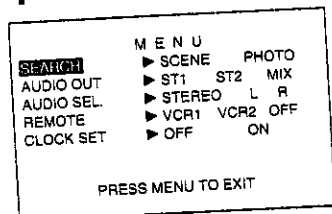**❸ 時間編碼指示**

該功能將更加精確地表示已攝影時間，當您打算進行精確的編輯時，非常有用。

([h] 意思為小時，[m] 意思為分鐘，[s] 意思為秒鐘，而 [f] 則意味著幀。)

將磁帶計數器指示改變為時間編碼指示時，請按攝錄影機上的 [COUNTER/DISPLAY] 鈕 (或遙控器上的 [DISPLAY] 鈕)。

(1幀 = 約1/25秒)

❹ 無指示

1

```
                MENU
SEARCH       ▶ SCENE    PHOTO
AUDIO OUT    ▶ ST1   ST2   MIX
AUDIO SEL.   ▶ STEREO   L   R
REMOTE       ▶ VCR1  VCR2  OFF
CLOCK SET    ▶ OFF      ON

             PRESS MENU TO EXIT
```

2

ENGLISH

Using the Index Search Function

This function can only be operated with the Remote Controller. It can be used in the following two ways to quickly locate and start playback of a desired tape position.

① **Scene Index Search**
<Recording Index Signals and Using the Scene Search Function>
An scene index signal is automatically recorded in the following cases.
●When you start recording after switching the Movie Camera over from the [VCR] to the [CAMERA] Mode.
●When you start recording after inserting a cassette.
●When you start recording either after more than 2 hours have elapsed or after the date has changed since the end of the previous recording. This depends on whether you have selected [2 HOUR] or [DAY] for the item [SCENE INDEX] (→ 52) in the [CAMERA] Mode Menu before recording.

1 In the VCR Mode Menu, select [SCENE] for the item [SEARCH] (→ 52).

2 Press the [▶▶ INDEX] Button ❶ or the [◀◀ INDEX] Button ❷ on the Remote Controller during playback.
●When you want to play back the fifth scene (marked with an index signal), in forward or reverse direction from the present tape position, for example, press the corresponding button five times. The tape is then fast-forwarded or rewound to the desired point and playback starts.
☞ If the length of a scene is less than 1 minute, the Index Search may not work correctly.

中文

怎樣使用索引尋影功能

該功能值可由遙控器操作。可以將其用於下列兩種方法中，以便迅速位於和開始播放需要的磁帶位置。

① 場景索引尋影
〈怎樣用索引信號攝影和怎樣使用場景尋影功能〉
在下列情況下，將自動攝製場景索引信號。
●在您將攝錄影機從 [VCR] 切換至 [CAMERA] 狀態後，開始攝影時。
●插入磁帶後，開始攝影時。
●在離開上次攝影 2 小時，或日期已經改變的情況下，開始攝影時。這將取決於您在攝影開始前，於 [CAMERA] 狀態條目中的 [SCENE INDEX] 項目 (→52) 內選擇了 [2HOUR] 或是 [DAY]。
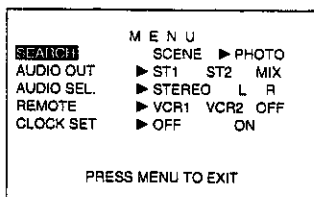
1 在VCR狀態條目下，選擇 [SEARCH] 項目的 [SCENE] (→52)。

2 在放影中，按遙控器上的 [▶▶ INDEX] 鈕❶或 [◀◀ INDEX] 鈕❷。

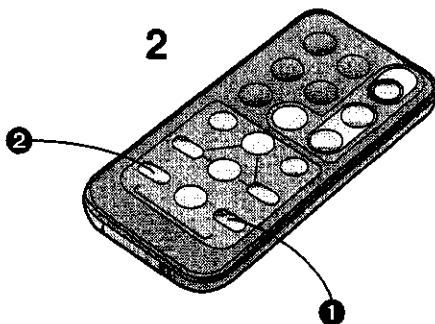例如，當您打算從目前的磁帶位置，在前後方向播放第 5 個場景 (由索引信號表示) 時，請按相應的鈕 5 次。磁帶便會快進或倒帶至需要的位置，然後開始播放。

☞ 如果場景長度短於 1 分鐘，索引尋影可能無法正常工作。

② **Photoshot Index Search**

<Recording Index Signals and Using the Photoshot Search Function>

A Photoshot index signal is automatically recorded every time you record a still picture.

1 In the VCR Mode Menu, select [PHOTO] for the item [SEARCH] (→ 52).

2 Press the [▶▶I INDEX] Button ❶ or the [I◀◀ INDEX] Button ❷ on the Remote Controller.

●At every press of the corresponding button, the tape is fast-forwarded or rewound to the next still picture (photoshot) marked with a photoshot index signal and that still picture is then played back.

☞ When a series of still pictures was recorded in the Photoshot Mode, the Photoshot Index Search may not work correctly.

■ **Scene Index Scan**

If you keep the [▶▶I INDEX] or [I◀◀ INDEX] Button pressed for more than 2 seconds during playback, the Scene Index Scan Function is activated and it plays back the beginning of each recorded scene one after another for a few seconds.

■ **Photoshot Index Scan**

If you keep the [▶▶I INDEX] or [I◀◀ INDEX] Button pressed for more than 2 seconds during playback, the Photoshot Index Scan Function is activated and it plays back each still picture (photoshot) one after another for a few seconds.

② 拍照索引尋影

〈怎樣用索引信號攝影和怎樣使用拍照尋影功能〉

每攝製一幀靜止畫面時，都會自動錄製一個拍照索引信號。

1 在VCR狀態條目下，選擇 [SEARCH] 項目的 [PHOTO] (→52)。

2 按遙控器上的[▶▶I INDEX]鈕❶或[I◀◀ INDEX] 鈕❷。

●每按一次相應的鈕，磁帶便會快進或倒帶至下一個具有拍照索引信號標誌的靜止畫面(照片)，然後會播放該靜止畫面。
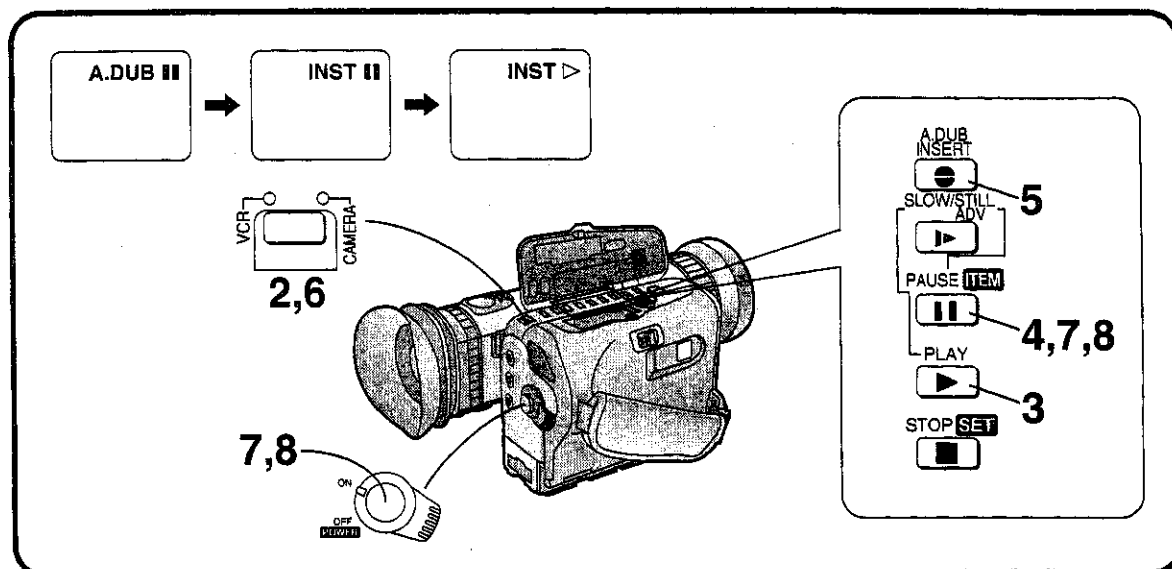
☞ 當拍照狀態中攝製了許多靜止畫面時，拍照索引尋影可能無法正常工作。

■ 場景索引掃描

如果您在放影中，持續按住 [▶▶I INDEX] 或 [I◀◀ INDEX] 鈕2秒鐘以上，場景索引掃描功能會啟動，並一個接一個地播放每個已錄場景的開頭幾秒鐘。

■ 拍照索引掃描

如果您在放影中，持續按住 [▶▶I INDEX] 或 [I◀◀ INDEX] 鈕2秒鐘以上，拍照索引掃描功能會啟動，並一個接一個地播放每個靜止畫面(照片)幾秒鐘。

Editing

Insert Editing

Insert Editing lets you replace pictures on a recorded cassette with new scenes or titles while the original sound remains unchanged.

1 Insert the recorded cassette. If the erasure prevention slider is open, close it (slide it in the direction of the [REC] arrow).

2 Press the [VCR/CAMERA] Button to select the [VCR] Mode.

3 Press the [▶] Button and play back the tape to locate the point where you want to start the Insert Editing.

4 Press the [‖] Button.

5 Press the [●] Button.
● The [A.DUB ‖] Indication appears in the Finder.

6 Press the [VCR/CAMERA] Button to select the [CAMERA] Mode.
● The [INST ‖] Indication appears in the Finder.

7 Press the Start/Stop Button or the [‖] Button.
● The [INST ▷] Indication appears in the Finder and Insert Editing starts.

8 If you did not turn on the Memory Stop Function, press the Start/Stop Button or the [‖] Button again at the point where you want to stop the Insert Editing.

挿入編輯

挿入編輯可讓您在原聲保持不變的情況下，用新的場景或標題更換已錄磁帶上的畫面。

1 挿入已錄磁帶。如果防消卡打開着，請將其關閉（將其朝[REC]箭頭方向滑動）。

2 按[VCR/CAMERA]鈕，選擇[VCR]狀態。

3 按 [▶] 鈕，播放磁帶，位於您打算開始進行挿入編輯之點。

4 按 [‖] 鈕。

5 按 [●] 鈕。
● [A.DUB ‖] 指示出現於尋像器中。

6 按 [VCR/CAMERA] 鈕，選擇 [CAMERA] 狀態。
● [INST ‖]指示和[PAUSE]指示出現於尋像器中。

7 按 Start/Stop 鈕，或 [‖] 鈕。
● [INST ▷] 指示出現於尋像器中，且會開始挿入編輯。

8 如果未啓動記憶停止功能時，請在您打算停止挿入編輯之處，再次按 Start/Stop 鈕或 [‖] 鈕。
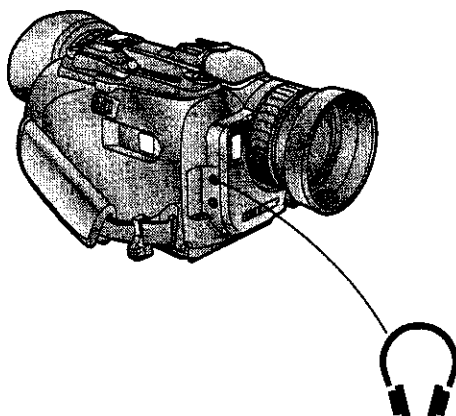
♥ Before starting the Insert Editing, play back the cassette and turn on the Memory Stop Function (➔ 118) at the point where you want the Insert Editing to end. This stops the Insert Editing automatically when that tape position is reached.

♥ If you want to monitor the original sound during the Insert Editing, connect headphones or earphones with M3 mini stereo plug to the [PHONES] Socket. [You can select the desired audio playback mode in the VCR Mode Menu (➔ 52).]

♥開始插入編輯之前，請在您打算停止插入編輯之點，播放畫面並啓動記憶停止功能（➔118）。當到達該磁帶位置時，本機會自動停止插入編輯。

♥如果您想在插入編輯中監聽原來的聲音時，請將具備M3微型立體聲插頭的頭戴耳機或耳機，連接至［PHONES］揷孔。（您可在VCR狀態條目（➔52）中，選擇需要的音頻播放狀態。）

A.DUB ❚❚ ➡ A.DUB ▷
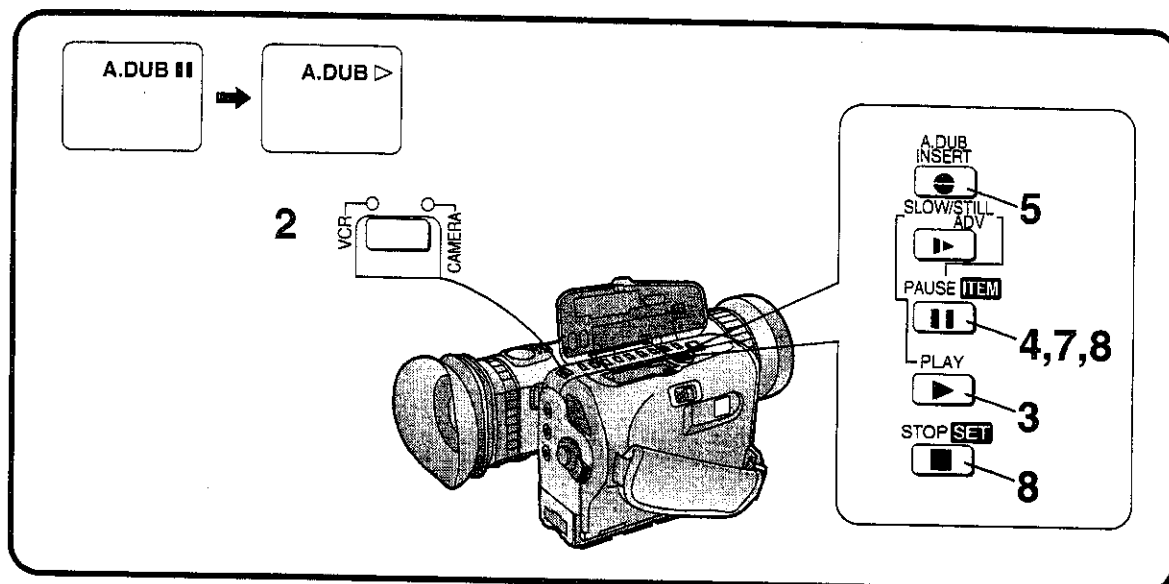
Audio Dubbing

Audio Dubbing lets you record music, narration or sound effects alone on a recorded cassette. By adding narration or music to vacations scenes, you can make your recordings even more attractive.

♥ If you use an external audio source unit or an external microphone, connect it to the [MIC] Socket on the Movie Camera.
♥ Connect the AC Adaptor to power the Movie Camera.
♥ Before starting the Audio Dubbing, play back the cassette and turn on the Memory Stop Function (→ 118) at the point where you want the Audio Dubbing to end. This stops the Audio Dubbing automatically when that tape position is reached.

1 Insert the recorded cassette.
If the erasure prevention slider is open, close it (slide it in the direction of the [REC] arrow).

2 Press the [VCR/CAMERA] Button to select the [VCR] Mode.

3 Press the [▶] Button and play back the tape to locate the point where you want to start the Audio Dubbing.

4 Press the [❚❚] Button.

5 Press the [◆] Button.
●The [A.DUB ❚❚] Indication appears in the Finder.

6 Operate the audio source unit.

7 Press the [❚❚] Button again.
●The [A.DUB ▷] Indication appears in the Finder and Audio Dubbing starts.

8 If you did not turn on the Memory Stop Function, press the [■] Button or the [❚❚] Button at the point where you want to stop the Audio Dubbing.
●The Audio Dubbing stops.

音頻拷貝

音頻拷貝可讓您在錄好的磁帶上，錄製獨一無二的音樂、對白或音響效果。由於在休假場景中增添了對白或音樂，將使您的攝影更具迷人色彩。
♥如要使用外部音頻信號源或外部麥克風時，請將其連接至攝錄影機的 [MIC] 插孔。
♥連接AC轉接器，給攝錄影機供電。
♥開始音頻拷貝之前，請在您打算結束音頻拷貝的位置，播放畫面並啓動記憶停止功能（→118）。當磁帶到達此處時，本機將自動停止音頻拷貝。

1 插入攝影磁帶。
如果防消卡打開著，請將其關閉（將其朝[REC]箭頭方向滑動）。

2 按[VCR/CAMERA]鈕，選擇[VCR]狀態。

3 按 [▶] 鈕，播放磁帶，位於您打算開始進行插入編輯之點。

4 按 [❚❚] 鈕。

5 按 [◆] 鈕。
●[A.DUB ❚❚] 指示出現於尋像器中。

6 進行音頻信號源機件的操作。

7 再次按 [❚❚] 鈕。
●[A.DUB ▷] 指示出現於尋像器中，且會開始音頻拷貝。

8 如果未啓動記憶停止功能時，請在您打算停止音頻拷貝之處，再次按[■]鈕或[❚❚]鈕。
●音頻拷貝會停止。

■ Sound recorded in the Audio Dubbing Function

When performing Audio Dubbing, the Movie Camera automatically selects the same Sound Mode that was used for the original recording.

Therefore, depending on the setting selected for [AUDIO REC] in the Camera Mode Menu (→ 46) for the original recording, audio dubbing sound is recorded as follows:

12 bit: This sound mode is initially selected. The sound originally recorded with the pictures remains unchanged on Stereo 1 [ST1]. The sound added with audio dubbing is recorded on Stereo 2 [ST2].

16 bit: Performing audio dubbing on a cassette which was originally recorded with [16 bit] selected for [AUDIO REC], the sound originally recorded with the pictures is erased and replaced by the audio dubbing sound.

♥ This means that the sound of recordings made in the 16-bit mode is erased by performing audio dubbing. Therefore, for recordings whose original sound you will want to keep even after performing audio dubbing, be sure to select [12 bit] for [AUDIO REC] before making the original recording.

■ Playing Back a Cassette on which Audio Dubbing Has Been Performed

Only when the original recording was made in the 12-bit Mode, can you select one of the following settings in the VCR Mode Menu (→ 52) for playback:

AUDIO OUT

ST1: The original sound (sound before performing audio dubbing) alone is played back. (The dubbed sound cannot be heard.)

ST2: The dubbed sound alone is played back.

MIX: The original sound and sound dubbed with Audio Dubbing are played back together.

AUDIO SEL.

STEREO: The sound is played back in stereo. (Normally, select this mode.)

L: The left channel sound alone is played back from both L and R terminals.

R: The right audio channel alone is played back from both L and R terminals.

♥ When the sound is recorded and dubbed in the 12-bit mode, stereo sound is always played back regardless of the setting for the item [AUDIO SEL.] when [MIX] has been selected for the item [AUDIO OUT].

■ 音頻拷貝功能攝製的聲音

進行音頻拷貝時，攝錄影機會自動選擇原攝影所用相同的聲音狀態。

因此，根據原攝影在攝錄影機狀態(→46)條目的[AUDIO REC]中選擇的設定不同，將如下錄製音頻拷貝聲音。

12畢特：該聲音狀態為初期選擇。
立體聲1 [ST1]之上原來與畫面一起攝製的聲音，將保留不變。用音頻拷貝增加的聲音將錄製在立體聲2[ST2]之上。

16畢特：在原來於[AUDIO REC]中選擇了16畢特來攝影的磁帶上，進行音頻拷貝，原來與畫面一起攝製的聲音將被抹消，且被音頻拷貝的聲音取代。

♥ 這意味着進行音頻拷貝時，將抹消在16畢特狀態下攝製的聲音。所以，對於您想在進行音頻拷貝後仍然保留原聲之攝影，必須在進行原來的攝影之前，選擇[AUDIO REC]中的[12畢特]。

■ 播放已經作過音頻拷貝的磁帶時

只有當原來的攝影在12畢特狀態下拍攝的時，才可在VCR狀態條目(→52)中，選擇下列設定之一進行放影：

AUDIO OUT(音頻輸出)

ST1：只播放原來的聲音(進行音頻拷貝之前的聲音)。(不能聽見拷貝的聲音。)

ST2：只能聽見拷貝的聲音。

MIX：將原聲和增加了音頻拷貝後的聲音一起混合輸出。

AUDIO SEL.(音頻選擇)

STEREO：以立體聲播放聲音。(通常選擇此狀態。)

L：左右兩個端子僅僅播放左聲道的聲音。

R：左右兩個端子僅僅播放右聲道的聲音。

♥ 當聲音是在12畢特狀態下攝影和拷貝的，且在[AUDIO OUT]中已經選擇了[MIX]時，不管[AUDIO SEL.]的設定如何，一般會播放立體聲音響。

[EDIT] EDIT ⓔ **3** PLAY ▶

1 VCR⌐ CAMERA⌐

2,4

[S-VIDEO IN] [VIDEO IN]

[OUTPUT]

[AUDIO IN]
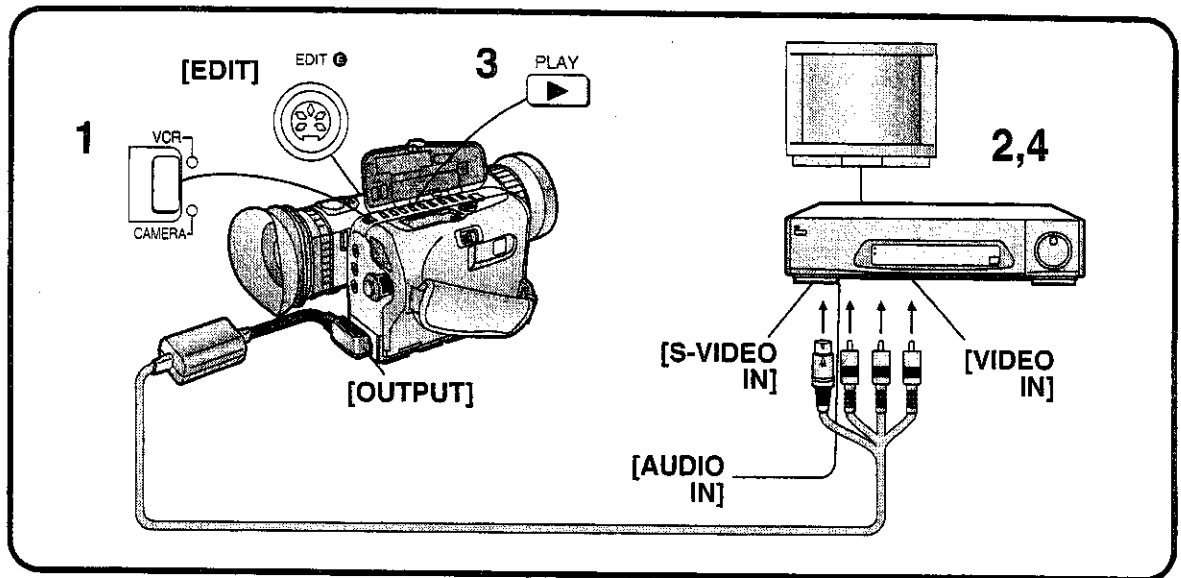
Copying from the Movie Camera to a S-VHS or VHS VCR (Dubbing)

If you connect the supplied Multi AV Cable as shown above, you can copy the cassette recorded with this Movie Camera onto a VCR. The cassette onto which the recording is copied can then be played back on a TV from the VCR.

♥ Use the AC Adaptor to power the Movie Camera.

1 Insert the recorded cassette into the Movie Camera and put the Movie Camera in the [VCR] Mode.

2 Insert an unrecorded cassette into the VCR and put it in the Recording Pause Mode.

3 Start playback on the Movie Camera.

4 Start recording the VCR.

■ **To Stop Dubbing:**
Stop recording on the VCR, and then stop playback on the Movie Camera.

♥ As the picture quality on the dubbed cassette slightly reduced, it is recommended to select the standard speed (SP Mode) for dubbing. If your VCR is equipped with an Edit Switch, turn it on to obtain better picture quality.

♥ This Movie Camera is equipped with an [EDIT] Socket. If your VCR is also equipped with an Edit Socket, using an optional Editing Controller makes possible to edit quickly and precisely.

怎樣從攝錄影機複製到 S-VHS 或 VHS VCR 上(拷貝)

若您如上圖所示, 連接了附帶的多用 AV 纜線時, 便可將用該攝錄影機攝製的磁帶複製到 VCR 上。之後, 可將複製有攝影的磁帶在 VCR 中播放, 而在電視機上觀賞。

♥ 用 AC 轉接器給攝錄影機供電。

1 將已錄磁帶插入攝錄影機, 使攝錄影機處於[VCR]狀態。

2 將空白磁帶插入 VCR, 並使 VCR 處於錄影暫停狀態。

3 開始攝錄影機放影。

4 開始 VCR 錄影。

■ 停止拷貝時:
先停止 VCR 上的錄影, 然後停止攝錄影機上的放影。

♥ 由於拷貝磁帶的畫面質量將略微降低, 所以建議您選擇標準速度(SP狀態)進行拷貝。如果您的 VCR 上具備編輯開關時, 請將其打開, 以便獲得較好的畫面質量。

♥ 該攝錄影機具備[EDIT]插孔。如果您的 VCR 也具備編輯插孔, 請使用選購編輯控制器, 以便進行快速和精確的編輯。

Precautions, Technical Information, etc.

Precautions

■ **Precautions When Using the Movie Camera**

In the event of abnormal operation (e.g. if the unit emits smoke or an unusual smell), immediately stop operating the unit and consult qualified service personnel.

☞ Do not disassemble or reconstruct the Movie Camera.
☞ Keep it away from water.
☞ Do not insert any foreign objects into it.
☞ Do not cover it with a cloth during use.
☞ Do not subject it to strong vibrations or shocks.
☞ Do not use it in places with oily smoke and much dust.
☞ When a thunderstorm approaches, stop using it. (If the AC Adaptor is being used, disconnect it from the AC mains socket.)
☞ Do not use it near magnetized equipment.
☞ Do not use it near a radio or TV.
☞ Do not use it with the cassette compartment facing down.
☞ Do not aim the Lens or Finder directly at the sun; the lens collects light and the resulting heat could deform internal precision parts and cause irreparable damage to the Movie Camera.
☞ Do not leave it in a closed car on a summer day. The inside temperature becomes higher than you imagine and this could damage the Movie Camera.
☞ Be careful not to drop the Movie Camera when carrying it. Attaching the Shoulder Strap prevents it from dropping. For optimum protection, use the optional System Case for transporting it.
☞ Never aim the Movie Camera with its Viewfinder or Lens directly at the sun; this could damage internal parts of the unit.

■ **Precautions When Storing the Movie Camera**

Be sure to take out the cassette and Battery before storing.

Avoid the following places:

☞ Places with high temperature and high humidity
   Recommended temperature: 15°C–25°C
   Recommended humidity: 40%–60%
☞ Places exposed to direct sunlight
☞ In direct contact with rubber or plastic products for a long time
☞ In reach of children

■ **Precautions for the AC Adaptor**

Observe the following points:

☞ Use it only for the specified Movie Camera and Battery.
☞ Do not handle the AC Adaptor with wet hands. To unplug the Mains Cable, be sure to pull by the plug, not by the cable.
☞ Do not forcefully bend the cables or alter them.
☞ Do not operate it very close to a radio, TV etc.

注意事項

■ **攝錄影機的使用注意事項**

如果發生異常現象(例如:本機冒烟或發出異味),請立即停止使用本機,並與專業維修人員洽詢。

避免下列情況:
☞ 勿拆卸或重新組裝攝錄影機。
☞ 勿讓其沾水。
☞ 勿讓任何異物插入本機之內。
☞ 勿在使用中用布將其蓋住。
☞ 勿使其受到強烈的震動或衝擊。
☞ 勿在油烟和灰塵較多之處使用。
☞ 當雷電接近時,請停止使用(如果使用交流轉接器,請將其從交流主電源插座上拔下。)
☞ 勿靠近磁性設備使用本機。
☞ 勿靠近收音機和電視機使用本機。
☞ 使用本機時,勿將磁帶室蓋朝下。
☞ 勿將鏡頭或尋像器直接對準太陽,否則鏡頭將聚集光線生熱,使內部精確零件變形,從而使攝錄影機遭受無法挽回的損失。
☞ 勿在夏天將其留在封閉的汽車之內。其內部溫度之高,會超出您的想像,因而可能損壞攝錄影機。
☞ 攜帶時要小心勿將其摔落。請安裝肩用背帶,以免其掉落。為獲得最佳保護,托運時,請使用選購系統携帶箱。
☞ 絕對勿將攝錄影機的尋像器或鏡頭直接對準太陽,否則會損壞本機的內部零件。

■ **存放攝錄影機時的注意事項**

存放之前,須取出磁帶和電池。

避免置於下列場所:
☞ 高溫或高濕之處
   推薦溫度:15℃—25℃
   推薦濕度:40%—60%
☞ 暴露在直射陽光之處
☞ 直接與橡膠或塑料物品長期接觸之處
☞ 兒童可觸摸之處。

■ **交流轉接器的注意事項**

請遵守下列要點:
☞ 只能將其用於規定的攝錄影機和電池。
☞ 勿用濕手處理交流轉接器。拔掉主電源線時,須握住插頭,而不能拉扯電源線。
☞ 勿過分彎折或改修電源線。
☞ 勿過於靠近收音機、電視機等進行操作。

■ Precautions for the Battery

The Battery's ability to generate electric energy is based on a chemical reaction. If the Battery is incorrectly handled, it could cause leakage, excessive rise in temperature, fire or explosion. Therefore be sure to observe the following points:

☞ Use only the specified AC Adaptor or Car Battery Charger to charge the Battery, and use the Battery only for this Movie Camera.

☞ When you have finished using the Movie Camera, remove the Battery.
If you leave the Battery in the Movie Camera, a small amount of electricity is consumed even if the [POWER] Switch is off, and this reduces the Battery's charge. Leaving the Battery in the Movie Camera for a very long time could discharge it excessively and this could make charging impossible.

☞ Do not allow metal objects such as keys and necklaces to touch the battery terminals.
Short-circuiting may occur and generate heat, and this could cause the Battery to explode. Be especially be careful when storing or carrying the Battery in a bag.

☞ Do not deform or alter it.

☞ When the operation time even after proper charging is too short for normal use, the service life of the Battery has reached its end. (It can be charged approx. 200 times.)

☞ If the Battery becomes too warn, a protection function is activated and it puts the Battery temporaly out of operation.

☞ Do not throw an exhausted Battery into fire.
This could cause it to explode.

☞ Do not charge, use or leave the Battery in a place where it is very hot, such as in direct sunlight or near a fire.

■ Cautions for Storing the Battery

Avoid the following places, as this could shorten the service life of the Battery:

☞ Places with extremely high temperature and high humidity
Recommended temperature: 15°C–25°C
Recommended humidity: 40%–60%

☞ Places with oily smoke and much dust
The terminals of the Battery get rusty.

☞ If you store the Battery for a long time, fully charge it at least once a year and use it until the charge is completely used up before storing it again.

■ Cautions for the Cassette

When you have finished using the Movie Camera, take the cassette out from the Movie Camera. If you store the cassette for a long time, fast-forward or rewind it at least once a year and expose the tape to fresh air.

Observe the following points to prevent deforming of the cassette case and deterioration of the quality.

☞ Do not subject the cassette to strong vibration or mechanical shocks.

☞ Do not place it near magnetized equipment.

☞ Avoid places where the temperature can raise high.

■ 電池注意事項

電池產生電能，是以化學反應爲基礎的。如果對電池處理不當，則可能引起漏電、溫度過高，甚至發生火災或爆炸。所以必須遵守下列各點：

☞ 給電池充電時，只能使用專用的交流轉接器或汽車蓄電池充電器，且只能將該電池用於本攝錄影機。

☞ 攝錄影機使用結束後，請取出電池。
如果將電池留在攝錄影機內，即使關閉了[POWER]開關，也仍將消耗少量電力，且會減少電池的電量。如果將電池放在攝錄影機內時間過長，可能使其過度放電，從而導致無法充電。

☞ 勿讓鑰匙、項鍊之類的金屬物體與電池端子相碰。
否則會發生短路，並發熱，從而引起電池爆炸。將電池放在手提包中儲存或攜帶時，須特別小心。

☞ 勿使其變形或進行改造。

☞ 如果在普通充電之後，電池的攝影時間也很短，不夠實際使用時，說明電池的使用壽命已到(電池約可充電200次)。

☞ 如果電池變得太熱，保護功能將啓動，並使電池暫停操作。

☞ 勿將耗盡的電池丟入火爐之中。
否則可能會引起爆炸。

☞ 勿在特別熱的地方，比如直射陽光之下或靠近火爐等處，進行充電、使用或放置電池。

■ 電池的儲存注意事項

避免下列場所，否則將縮短電池的使用壽命：

☞ 置於特別高溫或高濕之處
推薦溫度：15℃—25℃
推薦濕度：40%—60%

☞ 置於油煙和灰塵過多之處
電池端子將變髒。

☞ 如果您要長期儲存電池時，請至少每年充足電1次，並在重新儲存之前，將其完全用光。

■ 磁帶的注意事項

當您結束使用磁帶後，請將其從攝錄影機中取出。如果磁帶存放過長，至少一年應將其快進或倒帶一次，並將磁帶擺放在新鮮空氣中。

請遵守下列要點，以免磁帶盒變形或質量下降。

☞ 勿讓磁帶遭受強烈的振動或機械衝擊。

☞ 勿置於磁性設備附近。

☞ 避免溫度昇高得太快之處。

■ Causes of Condensation and Remedies

When condensation has formed inside the Movie Camera and on the tape, recording becomes impossible. In addition, if the tape remains in contact with the heads and this could seriously damage the Movie Camera.

Main causes of condensation:
- ☞ When the Movie Camera is brought from a cold to a warm place.
- ☞ When the Movie Camera is taken outdoors from inside an air-conditioned car or house.
- ☞ When the heating is turned on in a cold room.
- ☞ When the Movie Camera is exposed to the cold breeze from an air-conditioner.
- ☞ When the Movie Camera is in a very hot or humid place or in a place with steam.

Symptoms of Condensation

- ♥ When turning on the Movie Camera, the Condensation Indication [U10/[▲]] appears in the Finder.
  (A few seconds later, the Movie Camera automatically turns itself off.)

Remedy as follows:

1. Take out the cassette.
2. Keep the Cassette Compartment open and wait a few hours.
3. A few hours later, turn on the Movie Camera and confirm that the Condensation Indication is not displayed any more.
   For added safety, wait about 1 more hour.

■ To Prevent Condensation from Forming

When bringing the Movie Camera from a very cold to a warm place, keep it in a tightly closed plastic bag or something similar for 1 to 2 hours before using it again.

■ When the Lens Is Fogged up

Turn the Movie Camera on and wait for about 1 hour until it has reached about the same temperature as its surroundings.

■ Dirty Video Heads and How to Remedy

If the video heads become dirty with dust, the picture quality deteriorates.

Symptoms of Dirty Video Heads

- ♥ When turning on the Movie Camera, the [U11/✪] Indication appears in the Finder for the first few seconds.
- ♥ When playing back a cassette with dirty heads on a TV, the picture is distorted. If the heads are extremely dirty, no picture is reproduced.

Remedy as follows:

- ♥ Insert the supplied Head Cleaning Cassette into the Movie Camera and play it back for 10-20 seconds (➔ 34).
- ☞ Too much cleaning wears down the video heads. If the playback picture is not clear after cleaning, it means that the video heads are worn out. Consult qualified service personnel.

■ 凝結濕氣的注意事項和處理方法

當攝錄影機內部和磁帶上已經凝結了濕氣時，將無法進行攝影。而且，如果磁帶與磁頭保持接觸，則會導致攝錄影機嚴重損壞。

凝結濕氣的主要原因：
- ☞ 將攝錄影機突然從冷環境移到熱環境時。
- ☞ 將攝錄影機從有空調的汽車和房屋內，拿到室外時。
- ☞ 當在冷房間中打開加熱器時。
- ☞ 當攝錄影機擺在空調機的冷風之下時。
- ☞ 當攝錄影機處於非常熱、很潮濕或有蒸氣的地方時。

濕氣的症狀

- ♥ 打開攝錄影機，凝結濕氣指示 [U10/[▲]] 出現於尋像器中。
  （幾秒鐘後，攝錄影機將自動關閉電源。）

處理方法如下：

1. 取出磁帶。
2. 讓磁帶室打開著，等待幾小時。
3. 等幾個小時後，再打開攝錄影機並確認濕氣指示是否還亮著。
   爲了確保安全，請再等 1 小時左右。

■ 爲了防止凝結濕氣

將攝錄影機從非常冷的環境帶到熱地方時，應該將攝錄影機放入密封的塑料包或類似物品內，保存 1～2 個小時後再加使用。

■ 當鏡頭上出現霧氣時

請打開攝錄影機，等待 1 小時左右，直到其已經達到與環境相同的溫度爲止。

■ 影像磁頭變髒和處理方法

如果影像磁頭被灰塵弄髒時，畫質會降低。

影像磁頭變髒的症狀

- ♥ 打開攝錄影機時，在頭幾秒鐘內，[U11/✪] 指示出現於尋像器中。
- ♥ 用變髒的磁頭在電視機上播放磁帶時，畫面會出現白色雜波。如果磁頭極髒，則可能沒有畫面。

處理方法如下：

- ♥ 將附帶的磁頭清洗磁帶插入攝錄影機之內，播放10—20秒鐘（➔34）。
- ☞ 清洗時間過長，則會磨損磁頭。如果清洗之後，播放的畫面不清晰，還說明影像磁頭已經磨壞。請咨詢專業維修人員。

Before Requesting Service

Power Source

Symptom	Cause	Action	Page
●Movie Camera does not turn on.	●Battery is not inserted.	●Insert it correctly.	68
	●Battery is not charged.	●Charge it.	64
	●AC Adaptor is not connected.	●Connect AC Adaptor correcly to Movie Camera.	18
●Movie Camera turns off soon.	●Battery is exhausted.	●Use a fully charged one.	64
	●Recording was paused for more than 6 minutes.	●Set [POWER] Switch to [OFF] to turn off Movie Camera, and then set it to [ON] again.	24
	●Condensation has formed.	●Wait several hours.	138

Recording

Symptom	Cause	Action	Page
●No picture appears in the Finder.	●[POWER] Switch is set to [OFF].	●Set it to [ON].	24
	●Lens Cap is on the Lens.	●Remove it.	22
	●Power Save Function has become activated.	●Hold Movie Camera in horizontal position.	74
●Indications in the Finder are not clearly visible.	●Eyepiece is not adjusted.	●Adjust with the Eyepiece Corrector Control.	22
	●Lens in Eyepiece is covered with dust or dirt.	●Clean lens in Eyepiece.	44
●Recording cannot be started.	●Slider of inserted cassette is open.	●Close it (slide in direction of [REC] arrow).	20
	●No Cassette is inserted.	●Insert a cassette with closed slider.	20
	●Tape has reached its end.	●Insert a new Cassette.	20
●Date and time are not displayed in the Finder.	●[DATE/TIME] Button was not pressed.	●Press the [DATE/TIME] Button.	72
	●Button-type battery is exhausted.	●Replace it with a new CR2032 battery.	58

Playback

Symptom	Cause	Action	Page
●No playback picture is reproduced.	●[POWER] Switch is set to [OFF].	●Set it to [ON] and press [VCR/CAMERA] Button so that [VCR] Indication Lamp light.	34
	●Movie Camera is not connected to TV set or it is connected incorrectly.	●Connect Movie Camera to TV set correctly.	36
	●Wrong channel is selected on TV set.	●Select correct channel.	—
●Mosaic-like patterns appear in the picture.	●Cue or Review Playback is being performed.	●This is not a malfunction.	40
	●The video heads are dirty.	●Use the supplied Head Cleaning Cassette to clean the video heads.	138
●Date and time are not displayed in the playback picture.	●[DATE/TIME] Button was not pressed.	●Press [DATE/TIME] Button.	72

Remote Controller

Symptom	Cause	Action	Page
●Remote Controller does not work.	●Button-type battery in the Remote Controller is exhauted.	●Replace it with a new CR2025 battery.	110
	●Selected Remote mode is not corrected.	●Set it correctly.	48, 54

Digital Video System

In the digital video system, picture and sound are converted into the digital signals and recorded onto the tape. This completely digital recording allows recording and playback of picture and sound with minimum quality deterioration. In addition, such data as Time Code, Date and Time are automatically recorded as sub-code separately from the picture and sound signals.

Features

Compared with conventional analog systems...
1) High Picture and Sound Quality
   - Superior picture resolution
   - Excellent signal-to-noise ratio
   - Stable picture
   - Minimised quality deterioration in dubbing
   - Minimised cross colour distortion
   - Minimised colour noise
   - PCM digital sound
2) Compact Size
   - 6.35 mm-wide tape
   - Compact cassette with long recording time
3) High Quality Editing
   - Recording and playback with reduced deterioration
   - Time Code Editing

■ Compatibility with Conventional Analog System

As this Movie Camera uses a digital method for recording picture and sound, there is no compatibility with conventional video equipment (Movie Cameras and VCRs) using analog systems. In addition, the size of the cassette is drastically reduced.
However, as the video and audio signals output from the audio and video output sockets are analog, you can connect this Movie Camera to your VCR or TV (→ 36) for playback.

數位影像系統

在數位影像系統中，畫面和聲音被轉換爲數位信號後，錄在磁帶上。這種完全的數位攝影技術，使您能夠質量損失最低地攝製和播放畫面和聲音。另外，還可將時間編碼、日期和時間等數據，自動錄製在與畫面和聲音信號分開的副編碼上。

特色

1) 優質畫面和聲音
   - 優異的畫面解像度
   - 傑出的信噪比
   - 穩定的畫面
   - 拷貝中最低的質量損失
   - 使交叉色彩失眞降至最低
   - 使色彩雜波降至最低
   - PCM數位音響
2) 體積小
   - 6.35mm 寬的磁帶
   - 能夠長時間攝影的微型磁帶
3) 高質量的編輯
   - 降低了攝影和放影損失
   - 時間編碼編輯

■ 與一般模擬系統的兼容性

由於該攝錄影機採用數位方法來拍攝圖像和聲音，所以與一般使用模擬系統的影像設備(攝錄影機和VCR)沒有兼容性。而且，磁帶的尺寸也大大縮小。
然而，由於從音頻和影像輸出挿孔輸出的影像和音頻信號爲模擬的，因此，您可將攝錄影機連接至VCR或電視機(→36)進行放影。

2 Modes of PCM Sound

For recording of the sound, this Movie Camera offers the choice between two different PCM audio recording modes. You can select the desired mode in the Camera Mode Menu (→ 46).

1) 16 bit 48 kHz 2 channels
   ● The "16-bit, 48 kHz, 2 channels" Mode offers superior stereo sound quality virtually on par with that of CDs.
2) 12 bit 32 kHz 4 channels
   ● The "12 bit, 32 kHz, 4 channels" Mode on the other hand lets you record the original sound in stereo on two audio channels and later perform audio dubbing in stereo on two additional channels.

■ Sub Code for Recording of Various Information

The Digital System offers the capability of recording sub code on which the following data is recorded:
Thanks to sub code recording, this Movie Camera offers a number of new versatile functions.

● Time code
● Recording date and time
● Index signals for locating the beginning of each recorded scene
● Index signals for locating the recorded still images (photoshots)

兩種狀態的PCM音響

對於聲音攝製，本攝錄影機準備了兩種不同的PCM音頻攝影狀態。您可以在攝錄影機狀態條目中選擇需要的狀態(→46)。

1) 16畢特48kHz雙聲道
   ● "16畢特, 48kHz, 2聲道"狀態, 可提供與CD不相上下的優異立體聲音質。
2) 12畢特32kHz4聲道
   ● 另一方面, "12畢特, 32kHz, 4磁迹"狀態可讓您用立體聲, 將原來的聲音錄製在2個音頻聲道上, 並且以後可以在另外2個聲道上用立體聲, 進行音頻拷貝。

■ 用於攝製各種信息的副編碼

數位系統可提供副編碼攝影兼容能力, 其上可拍攝下列數據：
由於有了副編碼, 所以該攝錄影機可提供許多新的靈活功能。

● 定時編碼
● 攝影日期和時間
● 位於每個已錄場景開頭的ID (識別) 信號
● 位於已錄靜止圖像 (拍照) 的ID信號

Function Principle of the White Balance (Tint) Adjustment

Video recording takes place under various light sources, from sunlight as the natural light source to a wide range of artificial light sources such as fluorescent lamps. As each of these light sources has a different colour temperature, each of them gives the colours of the subject a slightly different tint.

Human Eyes can easily adjust to different kinds of lighting and recognize an object as having the same colour, even under different light.

The eye of the Movie Camera (lens), however, cannot adapt to the change in lighting and is influenced by the lighting. Therefore, depending on the light source, the picture is recorded with bluish or reddish tint. To minimize the influence of the lighting on the colours of the subject, an adjustment called White Balance Adjustment is necessary.

■ Auto White Balance Adjustment

This Movie Camera offers both Auto White Balance Adjustment and Manual White Balance Adjustment. If the Movie Camera is put in the Full Auto Mode, the internal system of the Movie Camera automatically determines the temperature of the light and compensates the tint of the subject accordingly. White is the basic colour by which the tint is determined. And because this adjustment is performed based on the white colour, it is called White Balance Adjustment. The optimum settings of several light sources are stored in memory of the Movie Camera. The internal microcomputer compares the colour temperature of the light received by the White Balance Sensor positioned on the front of the Movie Camera with the colour stored in memory, and selects the setting for the most similar tint.
Be careful not to cover the White Balance Sensor with your hand, etc.

■ Manual White Balance Adjustment

Although this Movie Camera stores the optimum settings for several light sources in memory to correctly judge the white colour, it cannot to cope with all light sources. Therefore, to record under those types of lighting which cannot be correctly adjusted with the Auto White Balance, use the Manual White Balance Adjustment (→ 88).

白色平衡(色調)調整的功能原理

影像攝影是在各種光源之下進行的：從太陽光的自然光, 到熒光燈之類的種類繁多的人工照明。由於每種光源都有不同的色溫, 所以以每種光源將給目標物的色彩帶來稍微不同的色調。

人眼可以輕易地適應各種光源, 甚至在不同的光線下, 也能識別具有同樣色彩的目標物。

然而, 攝錄影機的眼睛却不能適應光線變化和受到光線的影響。所以, 根據光源不同, 攝製的畫面可能會偏藍或泛紅。爲了最大限度地抑制光線對目標物色彩的影響, 因此有必要進行稱作白色平衡的調節。

■ 自動白色平衡

本攝錄影機可提供自動白色平衡和手動白色平衡兩種調節。如果攝錄影機處於全自動狀態, 則攝錄影機的內部系統將自動決定和調節目標物的色調。白色爲決定色調的基本色。因爲此項調節是以白色爲基礎進行調節的, 所以也稱爲白色平衡調節。攝錄影機的記憶中儲存了幾種光源的最佳設定值。內部微電腦用記憶中儲存的色彩, 比較穿過攝錄影機前面的白色平衡感應器進來的光線, 並選擇最相近色調的設定值。小心不要用手等, 遮住白色平衡感應器。

■ 手動白色平衡

本攝錄影機在記憶中儲存了幾種光源的最佳設定值, 可用來正確地識別白色。然而, 却無法應付所有的光源。所以, 拍攝不能用自動白色平衡進行調節的目標物時, 請使用手動白色平衡調節(→88)。

Function Principle of the Focus Adjustment

If you look at an object through a magnifying glass and move it closer or further away from your eye, you will reach a point where the object becomes clearly visible. Being focused or in focus means that the subject can be seen with optimum clarity and sharpness. The distance between the lens and the point where the rays of light come together is called Focal Distance or Focal Length and it depends on the size and shape of the lens.

Human eyes have lenses as well, and when we look at objects at different distances, the shape of these lenses changes automatically so that we can always see these objects clearly.

■ Auto Focus Adjustment

The image of the subject enters the Movie Camera through the lens and is converted into an electrical signal (video signal) for recording onto tape. Based on the signal, the Auto Focus System automatically adjusts the focal distance by moving the focusing lens forward or backward.

聚焦調整的功能原理

如果您用放大鏡觀看目標物，使其靠近或離開您的眼睛時，將會找到目標物清晰可見的一點。聚好焦或已聚焦意味着可以最清晰和鮮明地看見目標物。鏡頭與光線能聚集在一點之間的距離，稱爲焦距或聚焦長度，它取決於鏡頭的尺寸和形狀。

人眼也有鏡頭，當我們觀看距離不同的目標物時，這些鏡頭的形狀會自動改變，使我們總能看清這些目標物。

■ 自動聚焦調節

目標物的圖像通過鏡頭進入攝錄影機，然後被轉換爲電子信號（影像信號）錄製在磁帶上。在攝錄影機內，自動聚焦系統將自動前後移動聚焦鏡頭來調節焦距。
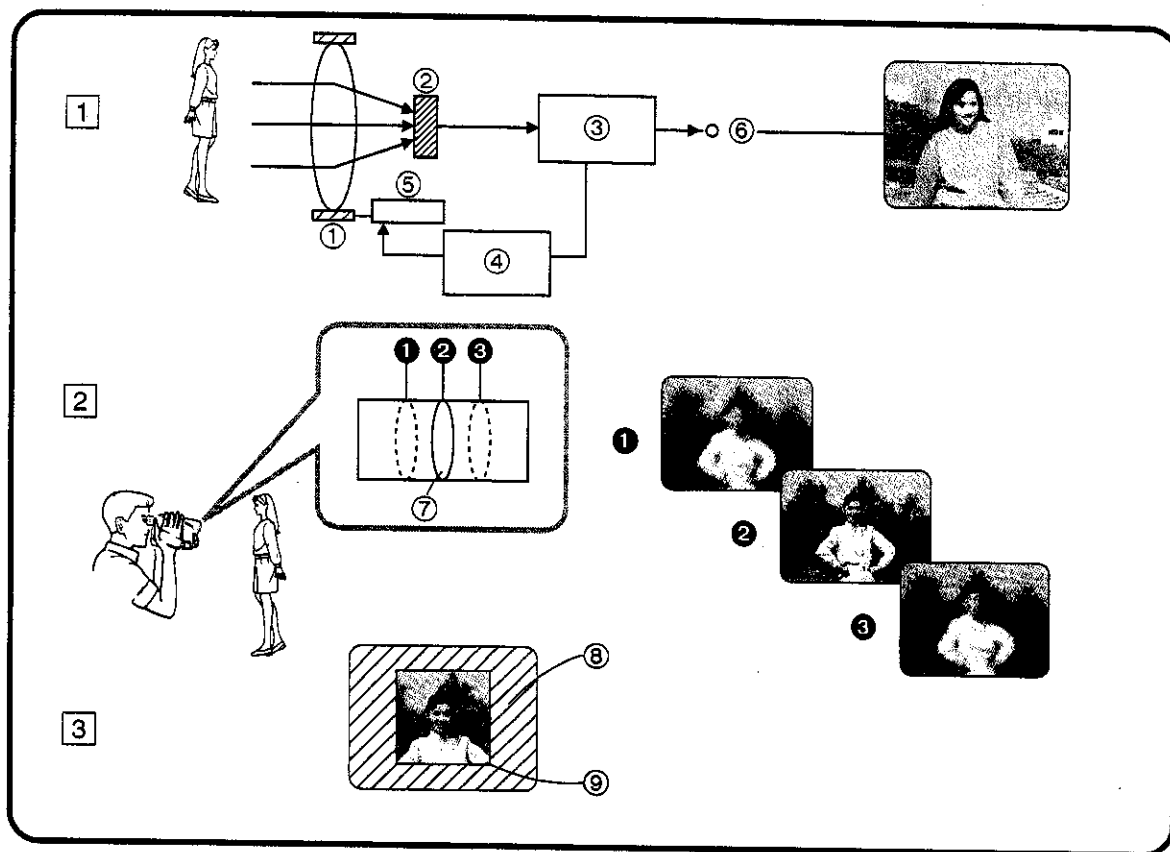
As shown in the above illustration, when you aim the Movie Camera at the subject you want to record, the microprocessor moves the lens little by little ❶, ❸ based on the information about vertical contours of the subject in the picture signal. At the point where the vertical contours of the subject become sharpest, it judges that the subject is in focus and stops the focusing lens ❷.

① Focusing Lens
② CCD Image Sensor
③ Signal Processing
④ Microprocessor
⑤ Motor
⑥ Video Signal
⑦ Focusing Lens
⑧ Finder Screen
⑨ Image area on which the Auto Focus adjusts the focus.

☞ As this Movie Camera automatically adjusts the focus based on the information on the subject's vertical contours, precise focusing is not possible for subjects with weak vertical contours (➔ 86).

☞ Unlike the human eye, the Movie Camera's Auto Focus System cannot change the focus from a distant to a close subject without any delay.

中 文

具體說明：
如上圖[2]所示，當您將攝錄影機瞄準要拍攝的目標物時，微電腦將根據畫面信號中的垂直輪廓信息，一點一點地移動鏡頭❶、❸。在目標物的垂直輪廓變得最清晰之點，本機將判斷目標物已經聚焦，並停止聚焦鏡頭❷。

① 聚焦鏡頭
② CCD圖像感應器
③ 信號處理器
④ 微電腦
⑤ 馬達
⑥ 影像信號
⑦ 聚焦鏡頭
⑧ 尋像器屏幕
⑨ 自動聚焦功能調節聚焦的圖像區域

☞ 由於該攝錄影機是根據目標物的垂直輪廓信息，來調節聚焦的，因此對於垂直輪廓模糊的目標物將無法獲得精確的聚焦（➔86）。

☞ 攝錄影機的自動聚焦系統不像人眼，無法立即改變遠處到近處目標物的聚焦。

1 U10 ⊞

2 U11 ☼

3 [battery icon]

4 [icon]

5 [icon]

6 ⊞END

7 ⊞DOOR

8 REMOTE

9 INCOMPATIBLE TAPE

9 UNPLAYABLE TAPE (OTHER FORMAT)

9 UNPLAYABLE TAPE (COPY-INHIBITED)
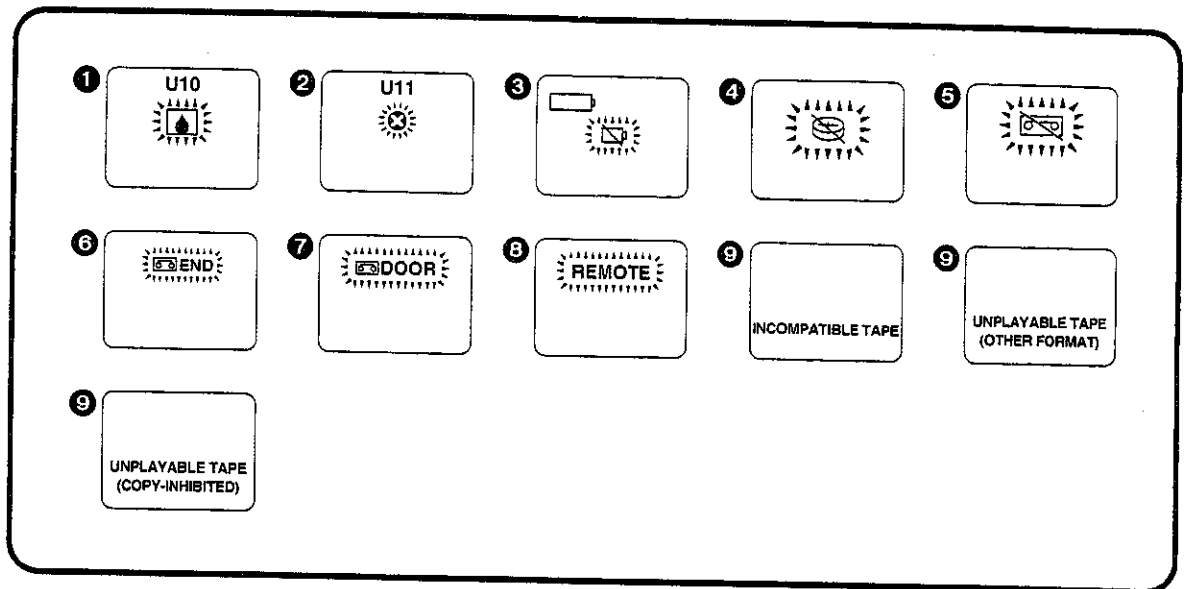
ENGLISH
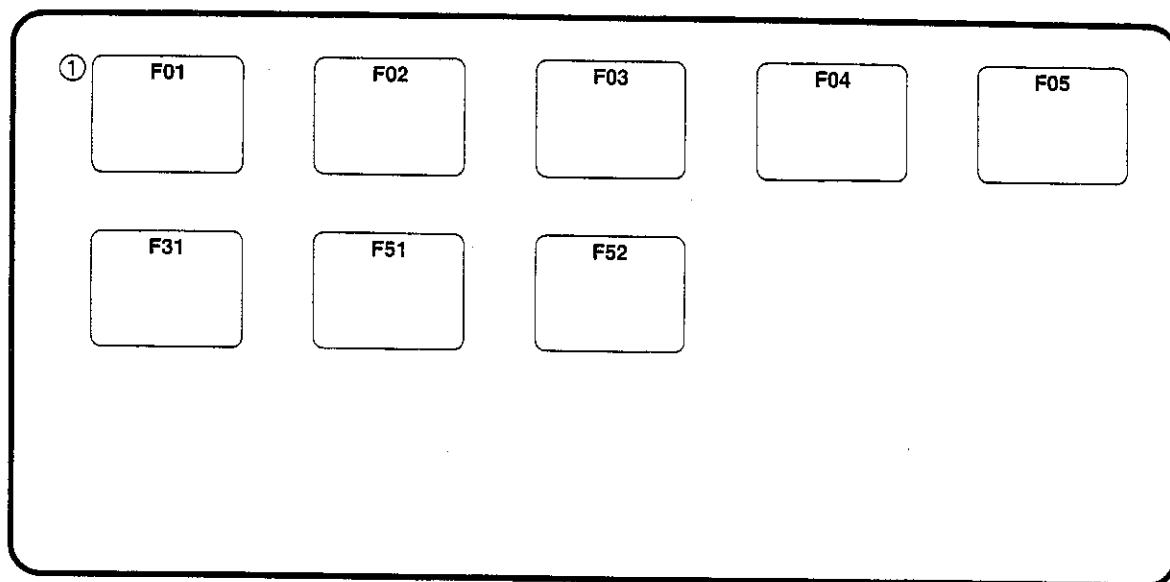
Indications in the Finder

■ Warning/Alarm Indications

1 Condensation (→ 138)

2 Video Head Clogging (→ 138)

3 Remaining Battery Power
When the last segment of this indication has disappeared, the Movie Camera automatically switches off. Replace the Battery with a fully charged one.

4 Button-type Battery (→ 10)
The button-type Battery in the Movie Camera is exhausted. Replace it and then set the date and time. (→ 58, 60)

5 No Cassette Inserted
No cassette is inserted. Or the erasure prevention slider of the inserted cassette is open; close it (slide it in the direction of the [REC] arrow) to be able to record on the cassette.

6 End of the Tape
When the tape has reached its end, this indication appears. Insert a new cassette.

7 Cassette Door Open
The Cassette Compartment is open.

8 Incorrect Remote Controller Mode Setting
The mode of the Remote Controller is not selected correctly. (→ 48, 54)

9 Incompatible Cassette or Recording
A cassette for TV studio use or one recorded in the LP or HD mode is inserted.

中 文

尋像器指示

■ 警告/報警指示

1 凝結濕氣 (→138)

2 影像磁頭堵塞 (→138)

3 剩餘電池電力
當該指示的最後一個方塊消失後,攝錄影機會自動關閉電源。請換上充足電的電池。

4 鈕扣式電池 (→10)
攝錄影器內的鈕扣式電池已經耗盡。請將其更換,然後設定日期和時間 (→58, 60)。

5 未插入磁帶
未插入磁帶。或插入磁帶上的防消卡打開著,請將其關閉 (將其朝 [REC] 箭頭方向滑動), 以便能夠在磁帶上攝影。

6 磁帶盡頭
當錄影帶走到盡頭時, 會出現該指示。請插入新的磁帶。

7 磁帶門開著
磁帶室打開著。

8 不正確的遙控器狀態設定
遙控器的狀態選擇不當 (→48, 54)。

9 不適合的磁帶和錄影
插入了電視演播室所用磁帶或以LP或HD狀態攝錄的磁帶。

F01	F02	F03	F04	F05

F31	F51	F52

① **Error Code**

(Error codes are information for service personnel.)

● If the [F] Indication with a 2-digit number appears in the Finder, some malfunction has occurred. If the indicated error code is between [F01] and [F05], the Movie Camera will turn itself off automatically one minute after the [CAMERA] Lamp has started to flash. (If the indication is [F31], [F51] or [F52], the Movie Camera will not turn off automatically.)

F01: Locked Take Up-Reel
F02: Locked Supply-Reel
F03: Locked Unloading Mechanism
F04: Locked Loading Mechanism
F05: Locked Cylinder
F31: Data Transmission Error (between camera stage and micro processor)
F51: Locked Focus Motor
F52: Locked Zoom Motor

① 錯誤符號

(錯誤符號是供維修人員使用的信息。)

● 當尋像器中出現了兩位數的 [F] 指示時，表示發生了故障。如果指示的錯誤符號在 [F01] 和 [F05] 之間，攝錄影機將在 [CAMERA] 指示開始閃爍1分鐘後，自動關閉電源（當指示為[F31]、[F51]或[F52]時，攝錄影機將不會自動關閉電源）。

F01 : 收帶輪鎖定
F02 : 供帶輪鎖定
F03 : 卸載機構鎖定
F04 : 裝載機構鎖定
F05 : 磁鼓鎖定
F31 : 數據傳送出錯（攝影裝置和微電腦之間）
F51 : 聚焦馬達鎖定
F52 : 變焦馬達鎖定

⑩ RECORD	⑪ REC	⑫ PAUSE	⑬ PAUSE	⑭ ▷
⑮ BLANK	⑯ ▷▷	⑰ ◁◁	⑱ A.DUB ▷	⑲ A.DUB ❚❚
⑳ INST ▷	㉑ INST ❚❚	㉒ 0:00.00	㉓ M 0:00.00	
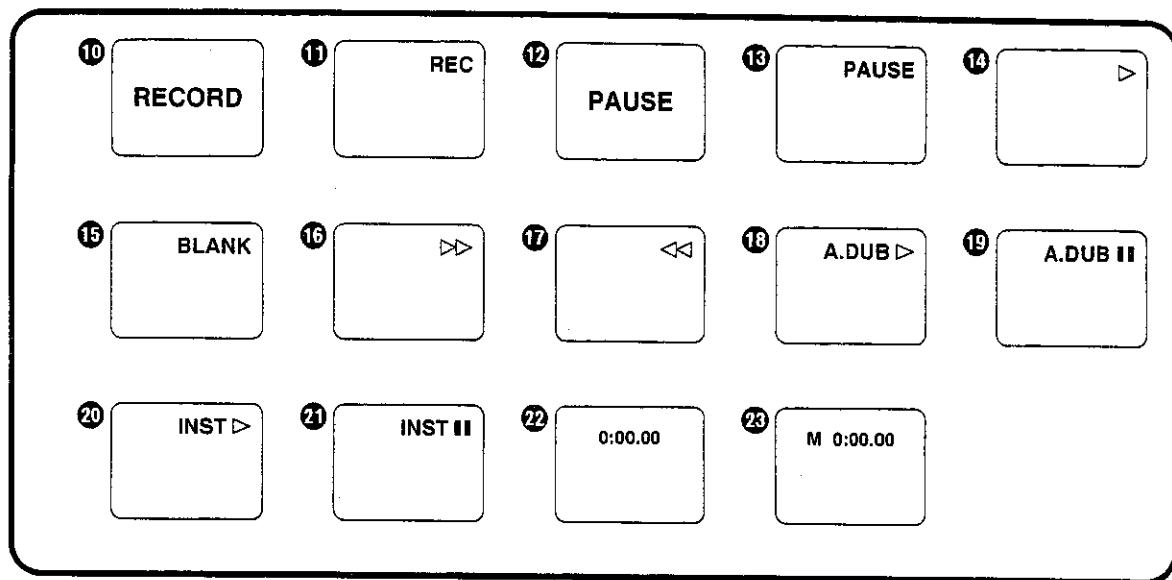
■ **Recording and Playback Indications**

⑩ Recording Mode (large indication) (→ 24)

⑪ Recording Mode (small indication) (→ 24)

⑫ Recording Pause Mode (large indication) (→ 24)

⑬ Recording Pause Mode (small indication) (→ 24)

⑭ Playback Mode (→ 34)

⑮ Blank Search Mode (→ 28)

⑯ Tape Fast-Forwarding Mode

⑰ Tape Rewinding Mode

⑱ Audio Dubbing Mode (→ 128)

⑲ Audio Dubbing Pause Mode (→ 124, 128)

⑳ Insert Editing Mode (→ 124)

㉑ Insert Editing Pause Mode (→ 124)

㉒ Tape Counter (→ 118)

㉓ Tape Counter with activated Memory Stop Function (→ 118)

■ 攝影和放影指示

⑩ 攝影狀態(大指示)(→24)

⑪ 攝影狀態(小指示)(→24)

⑫ 攝影暫停狀態(大指示)(→24)

⑬ 攝影暫停狀態(小指示)(→24)

⑭ 放影狀態(→34)

⑮ 空白尋影狀態(→28)

⑯ 磁帶快進狀態

⑰ 磁帶倒帶狀態

⑱ 音頻拷貝狀態(→128)

⑲ 音頻拷貝暫停狀態(→124, 128)

⑳ 插入編輯狀態(→124)

㉑ 插入編輯暫停狀態(→124)

㉒ 磁帶計數器(→118)

㉓ 帶聲動記憶停止功能的磁帶計數器(→118)

㉔ 0h00m00s00f

㉕ 🔋

㉖ R 0:30

㉗ 12:34:00 / 12. 4.1997

㉘ 10× W[▭▭]T

㉙ ☼

㉚ ☀

㉛

㉜

㉝ D.ZOOM

㉞ MF

㉟ ►1/50

㊱ (Camera Menu)

㊲ (VCR Menu)
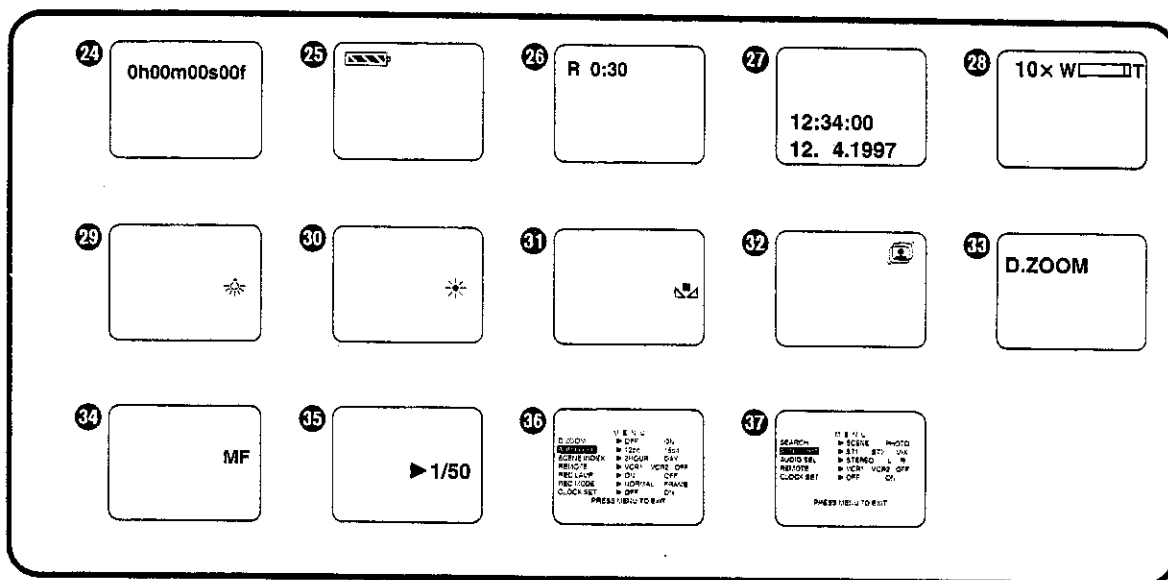
㉔ Time Code (➜ 118)

㉕ Remaining Battery Power (➜ 68)

㉖ Remaining Tape Time

㉗ Date and Time (➜ 72)

㉘ Zoom Gauge/Magnification (➜ 30)

㉙ Indoor Incandescent Lamp Mode (➜ 90)

㉚ Outdoor Mode (➜ 90)

㉛ White Balance Set Mode (➜ 90)

㉜ Electronic Image Stabilizer Mode (➜ 76)

㉝ Digital Zoom Mode (➜ 30, 48)

㉞ Manual Focus Mode (➜ 98)

㉟ Shutter Speed (➜ 106)

㊱ Camera Menu Mode (➜ 48)

㊲ VCR Menu Mode (➜ 54)

㉔ 時間編碼(➜118)

㉕ 剩餘電池電力(➜68)

㉖ 剩餘磁帶時間

㉗ 日期和時間(➜72)

㉘ 變焦表/放大率(➜20)

㉙ 室內白熾燈狀態(➜90)

㉚ 室外狀態(➜90)

㉛ 白色平衡設定狀態(➜90)

㉜ 電子圖像穩定器狀態(➜76)

㉝ 數位變焦狀態(➜30, 48)

㉞ 手動聚焦狀態(➜98)

㉟ 快門速度(➜106)

㊱ 攝錄影機條目狀態(➜48)

㊲ VCR條目狀態(➜54)

| 38 CINEMA | 39 PHOTO 🖻 001 | 40 ▶F5.6 | 41 ᴬᴱ LOCK | 42 12dB |
| 43 12bit | 44 S 1 | 45 APS | | |

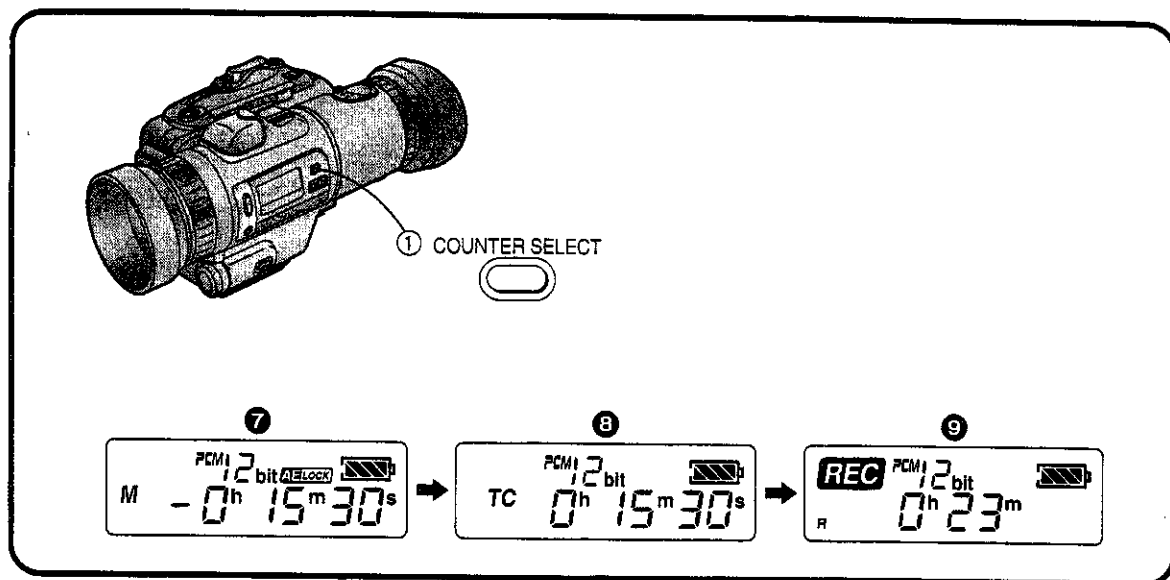## Indications on the LCD Screen
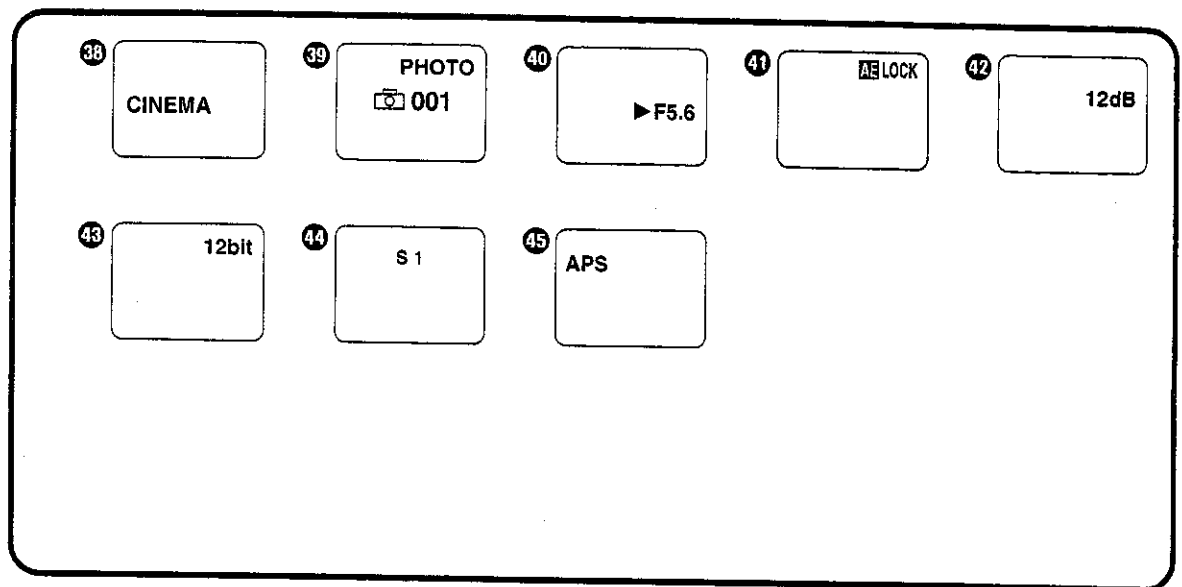
❶ Recording Mode

The [REC] Indication appears when the recording starts.

❷ Audio Rec Mode

The mode selected for audio recording is indicated. Selecting the desired mode is possible in the Camera Mode Menu.

12 bit: Audio recording in the 12-bit mode.
16 bit: Audio recording in the 16-bit mode.

❸ AE Lock

This indication appears when the AE Lock Function is activated.

❹ Remaining Battery Power

This indication shows the charging condition of the inserted battery. As the remaining battery power decreases, the indication changes as follows:

[battery icons] → → → →

When the battery is completely exhausted, the [( )] Indication flashes.

❺ F Number

This indication appears when the iris is adjusted in the Manual Mode. ([F5.6]=F Number 5.6)

❻ Shutter Speed

This indication appears when the shutter speed is adjusted in the Manual Mode.
([s15 00]=Shutter Speed 1/1500 s)

液晶顯示屏指示

❶ 攝影狀態

攝影開始時,會出現[REC]指示。

❷ 音頻攝錄狀態

表示音頻攝錄所選擇的狀態。
可以在攝錄影機狀態條目屏幕上選擇需要的狀態。
12畢特：以12畢特狀態進行音頻攝錄。
16畢特：以16畢特狀態進行音頻攝錄。

❸ AE鎖定

當AE鎖定功能啓動時，該指示會出現。

❹ 剩餘電池電量

該指示表明了插入電池的充電狀況。隨着電池電量的減少，該指示將如下變化：

[battery icons] → → → →

當電池完全耗盡時， [( )] 指示會閃爍。

❺ F數值

當用手動狀態調節光圈時，該指示會出現。
([F5.6]=F數值5.6)

❻ 快門速度

當用手動狀態調節快門速度時，該指示會出現。
([s15 00]=快門速度1/1500秒)

① COUNTER SELECT

❼   ❽   ❾

■ Changing the Indications on the LCD Screen

At each press of the [COUNTER SELECT] Button ①, the indications on the LCD Screen change as shown in the illustration above.

❼ Tape Counter

The elapsed tape time is counted and indicated. When the Memory Stop Function is activated, the Memory Indication [M] appears, too.

❽ Time Code

The value of the Time Code reached during recording appears.

In the Finder, the Time Code is displayed in hours, minutes, seconds and frames. On the LCD Screen, however, it is indicated in hours, minutes and seconds.

❾ Remaining Tape Time

The remaining tape time is displayed in minutes. When it becomes less than 3 minutes, the indication starts to flash. While the remaining tape time is calculated, the [R] Indication flashes.

■ 怎樣改變液晶顯示屏上的指示

每次按[COUNTER SELECT]鈕①，液晶顯示屏上的指示將如上圖所示進行改變。

❼ 磁帶計數器

計算和表示已錄磁帶時間。

當記憶停止功能啓動時，也會出現記憶指示[M]。
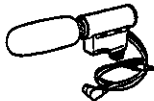
❽ 時間編碼

攝影中，會出現時間編碼所達到的值。

將以小時、分鐘、秒鐘和幀，在尋像器中顯示時間編碼。然而，在液晶顯示屏中，將以小時、分鐘和秒鐘顯示。

❾ 剩餘磁帶時間

以分鐘顯示剩餘磁帶時間。當其小於 3 分鐘時，該指示將開始閃爍。在剩餘磁帶時間計算中，[R] 指示會閃爍。

1. VW-VBD1E	2. VW-VBD2E	3. VW-KBD1E	4. VW-K10E	5. VW-LF49E	6. VW-LW2E
7. VZ-CT55E	8. VZ-CT75E	9. VW-VMS1E	10. VW-EC310E	11. VW-EC1E	12. VW-VT1E
13. VW-SHC100E					

ENGLISH

Optional Accessories

1. Battery
2. Battery (large)
3. Car Battery Charger
4. 5-Pin Synchro Cord
5. Filter Kit
6. Wide Conversion Lens
7. Standard Tripod
8. Deluxe Tripod
9. Stereo Zoom Microphone
10. Editing Controller
11. Editing Controller
12. Video Titler
13. System Case

☞ Some accessories are not available in some countries.

中　文

選購附件

1. 電池
2. 電池(大)
3. 汽車蓄電池充電器
4. 5針同步纜線
5. 濾光鏡組件
6. 廣角鏡頭
7. 標準三角架
8. 豪華三角架
9. 立體聲雙焦微電腦
10. 編輯控制器
11. 編輯控制器
12. 影像字幕拍錄器
13. 系統箱

☞ 有些附件可能在某些國家沒有銷售。

Specifications

Information for your safety

Digital Video Camera

Power Source:	7.2 V (Battery)
	8.4 V (AC Adaptor)
Power Consumption:	7.5 W
Recording Format:	Digital Video SD Format
Tape Format:	Mini DV
Recording/Playback Time:	60 min. with DVM60
VIDEO	
Recording Format:	Digital Component
Television System:	CCIR; 625 lines, 50 fields PAL
	colour signal
Output Level:	VIDEO OUT(PHONO);
	1.0 Vp-p, 75 ohm terminated
AUDIO	
Recording Format:	Digital PCM Stereo;
	16 bit (48 kHz/2 ch)
	12 bit (32 kHz/4 ch)
Output Level/Impedance:	AUDIO OUT(PHONO);
	−10 dBV (47 kohm loaded)/less
	than 1 kohm
	Phones (M3); −24.0 dBV
	(32 ohm loaded)/120 ohm
Input Sensitivity/	
Impedance:	Mic In (M3); −70 dBV/4.7 kohm
	or more unbalanced
Image Sensor:	1/3-inch CCD Image Sensor×3
	(RGB)
Lens:	10:1 Variable Speed Power Zoom
	Lens
	F1.6
	Focal Length; 6–60 mm
	Filter Diameter; 49 mm
Finder:	0.7-inch Colour LCD Viewfinder
Standard Illumination:	1,400 lx
Minimum Required	
Illumination:	4 lx
Operating Temperature:	0°C–40°C
Operating Humidity:	10%–80%
Weight:	Approx. 1.1 kg
	(without Battery)
Dimensions:	Approx.144 (W)×121 (H)×
	267 (D) mm

AC Adaptor

Information for your safety

Power Source:	AC 100–240 V, 50–60 Hz
Power Consumption:	20 W
DC Output:	DC 8.4 V, 11 W
	(Movie Camera Operation)
	DC 8.4 V, 1.2 A
	(Battery Charging)
Weight:	Approx. 170 g
Dimensions:	72 (W)×43 (H)×98 (D) mm

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

規格

您的安全信息

數位攝錄影機

電源：	7.2V（電池組）
	8.4V（交流轉接器）
電力消耗：	7.5W
攝影規格：	數位影像SD格式
磁帶格式：	微型DV
攝影/放影時間：	60分鐘（使用DVM60磁帶時）
影像	
攝影格式：	數位構成
電視制式：	CCIR;625線, 50幀PAL彩色信號
輸出電平：	影像輸出（PHONO）;
	1.0Vp-p, 75歐姆端接
音頻	
攝錄格式：	數位PCM立體聲:16畢特
	（48kHz/2磁迹）12畢特（32kHz/4磁迹）
輸出電平/阻抗：	音頻輸出（PHONO）;
	−10dBV（47千歐負載）/低於1千歐
	耳機(M3);-24.0dBV（32歐姆負載）/
	120歐姆
輸入感應度/阻抗：	麥克風輸入(M3);-70dBV/4.7千歐
	或額外非平衡式
圖像感應器：	1/3英寸CCD圖像感應器×3(RGB)
鏡頭：	10:1 變速動力變焦鏡頭
	F1.6
	聚焦長度;6—60mm
	濾光鏡直徑;49mm
電子尋像器：	0.7英寸彩色電子尋像器
標準亮度：	1,400lx
最低要求亮度：	4lx
操作溫度：	0℃ −40℃
操作濕度：	10%−80%
重量：	約1.1公斤
	（電池組除外）
尺寸：	約144(寬)×121(高)×267(深)mm

交流轉接器

您的安全信息

電源：	AC100−240V, 50−60Hz
電力消耗：	20W
直流輸出：	DC8.4V, 11W
	（攝錄影機操作時）
	DC8.4V, 1.2A
	（電池組充電時）
重量：	約170克
尺寸：	72(寬)×43(高)×98(深)mm

重量和尺寸爲近似値。
規格若有變更, 恕不另行通知。